

# Technical COMMUNICATION

*Journal of the Society for Technical Communication*

## DANGEROUS NEIGHBORS: ERASIVE RHETORIC AND COMMUNITIES AT RISK

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TECHNICAL  
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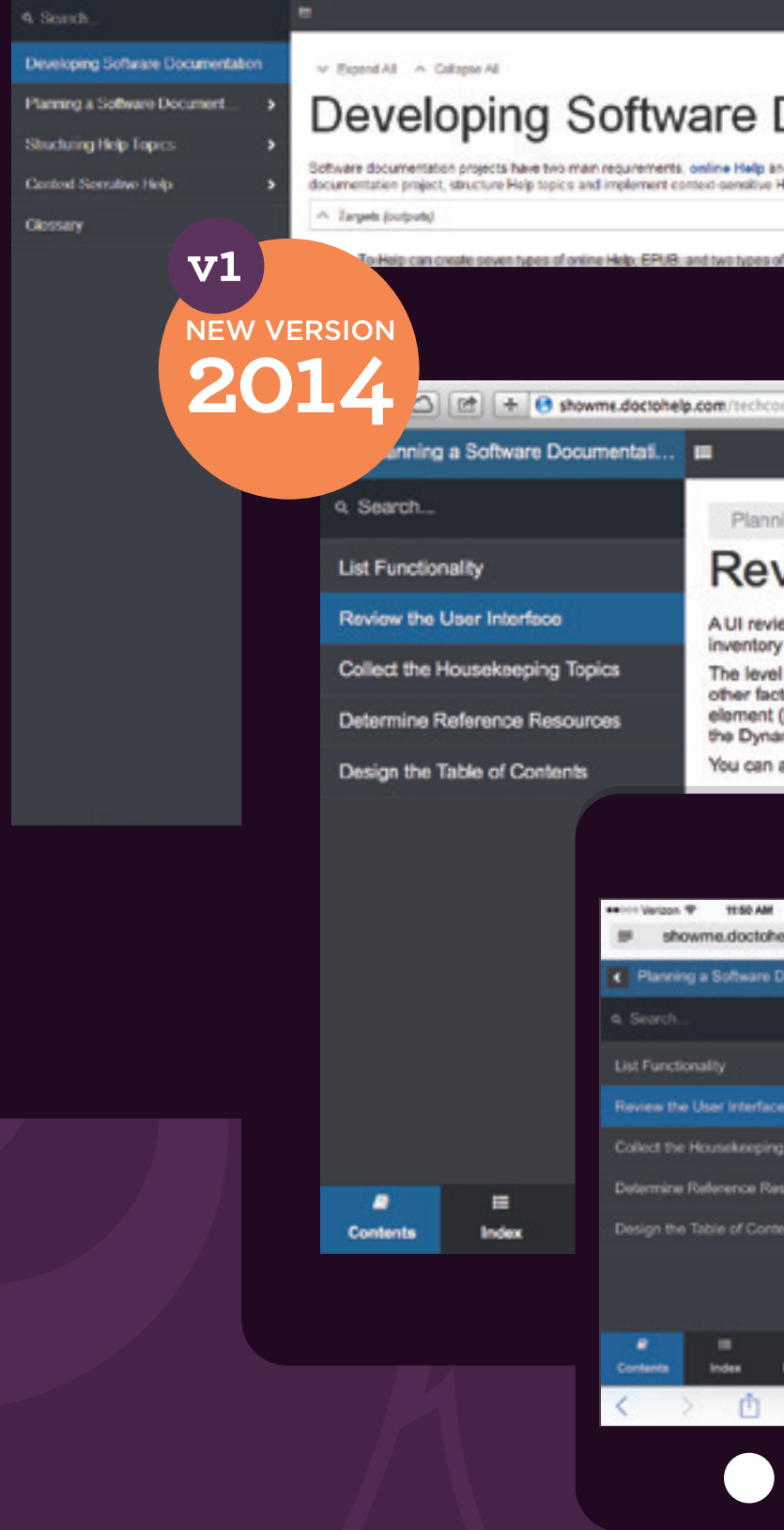
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## About the Journal

*Technical Communication* is a peer-reviewed, quarterly journal published by the Society for Technical Communication (STC). It is aimed at an audience of technical communication practitioners and academics. The journal's goal is to contribute to the body of knowledge of the field of technical communication from a multidisciplinary perspective, with special emphasis on the combination of academic rigor and practical relevance.

*Technical Communication* publishes articles in five categories:

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Menno D.T. de Jong, Editor



# The Faces of Technology in Technical Communication

Of all communication disciplines, technical communication might be the most viable sub discipline. Technology is omnipresent in current societies and is hardly ever self-explanatory. Technological developments go fast, and the reactions of intended and unintended users appear to be hard to predict. Technical communicators are sitting on a goldmine with their unique expertise in understanding users, explaining complex technologies, and making technology easy to use.

Throughout the years, the field of technical communication seems to have broadened. The unique feature of being able to explain complex systems or devices made technical communicators well-equipped for communicating about legal, policy, risk, or health-related issues. The growing interwovenness of communication and technology made technical communicators suitable for all kinds of computer-mediated communication.

As a consequence, technical communication as a discipline has filled some gaps that were left behind by other disciplines. Think of the attention in the technical communication literature to the role and design of presentation slides, or to the problem of writing for the Web.

The downside of such developments is that some of the important aspects of technology seem to lose prominence in the

books and journals. This may partly be due to the location of technical communication programs and scholars in universities: most often in English departments and Arts or Humanities schools. It may also be ascribed to difficulties in researching and writing about highly specialized technological topics. To further strengthen the relationship between theory and practice, more research attention to more technological aspects of technical communication would be welcome.

## Four Technological Orientations

Let me clarify my assertions by briefly discussing four technological orientations. The first involves the usability of and user support for consumer products and software packages. Implicitly, most of the attention for technology in the technical communication literature seems to fall into this category. Technical communicators are confronted with users who increasingly expect that the device or software can be used without any form of user support, and who may be reluctant to refer to a manual or online help system, even in the case of an impasse. The main tasks of the technical communicator are to offer support for users at the moments they need it, and to make them aware of the functionality of the product. The significance of the work of technical communicators is underlined by two developments. First, there is

an enormous amount of informal user support freely available on the Internet in the form of discussion groups or user forums. Second, there is also a flourishing industry of commercially available manuals, for which consumers appear to be willing to pay considerable amounts of money. As reluctant as the users of consumer products and software packages may be to look for the official user support, they do realize they need help sometimes. Several fascinating research themes announce themselves in this area, including the comparison of informal, commercial and official types of user support, and people's underuse of products and strategies of making users aware of neglected product functionality. The role of the technical communicator is strategically very important as it is directly related to the (perceived) value of the product or software package and may increase user satisfaction and loyalty.

The second technological orientation involves the advanced technology – the usability of and user documentation for highly specialized and complex devices that are not meant for mass user audiences but for specialized professionals. In many cases, the correct usage of such devices can be a matter of life and death, such



as in aviation, military, healthcare, space travel, and machine building contexts. In the recent literature on technical communication, the work of technical communicators in such industries is largely underexposed. It would be very interesting to know more about the problems, strategies and experiences of technical communicators in

this area. What are the similarities and differences with the work of technical communicators in the consumer goods and software packages industries? How do technical communicators handle the responsibility of critical usability issues?

The third technological orientation involves the relationship

between technology and communication. Since the rise of ICTs, the contribution of technology as communication means has grown in importance. Research into the design of Web sites or PowerPoint slides can be seen as an example, but Web sites and PowerPoint can no longer be seen as cutting-edge technology. It would be interesting to expand the spectrum to newer contributions of technology to human communication. One such development is persuasive technology, in which the design of technology replaces verbal and visual messages and influences people's behaviors. One can think of the world of mobile apps, which affect our daily lives in many respects.

The fourth technological orientation involves the use of technology in the workplace. More than any other communication professionals, technical communicators are used to working with tools to collaborate, to manage documentation projects, to support translations, or to merge text and (audio)visual elements. One can think of information management and component content management. In the Book Reviews section of this journal, we can see many examples of useful handbooks in this area. However, the research attention to the use and effects of such tools is still limited. Research that addresses the effects of tooling in the writing environment on the usability of instructions would, in my view, for instance be fascinating.

### In This Issue

This issue includes three articles. The first article is written by Sam

### Frank R. Smith Outstanding Article Award 2013

Each year, an independent jury of three researchers and practitioners selects one outstanding article and up to three distinguished articles that appeared in *Technical Communication* during the previous calendar year. This year's jury members were Editorial Advisory Board member Avon Murphy (chair), David Kowalsky, and winner of last year's Outstanding Article Award, Hanna Jochmann-Mannak. The award honors the memory of Frank R. Smith, during whose 18 years as editor this journal became established as the flagship publication of STC and of the profession. This year, the jury selected one outstanding and one distinguished article.

#### 2013 Outstanding article in *Technical Communication*

Lisa Meloncon and Sally Henschel. Current State of U.S. Undergraduate Degree Programs in Technical and Professional Communication. (February 2013)

"For their in-depth, critical review of 65 programs in technical and professional communication in the United States. Their analysis of trends between 2005 and 2011 uses a methodology that makes it easy to replicate their study."

#### 2013 Distinguished article in *Technical Communication*

Hans van der Meij and Jan van der Meij. Eight Guidelines for the Design of Instructional Videos for Software Training. (August 2013)

"For enunciating guidelines that can help us produce training videos that lead to increased motivation, proficiency, and retention of skills. The authors validate each guideline by connecting it to major experimental studies and closely analyzed examples of effective videos."

Dragga and Gwendolyn Gong, and focuses on the intersection between technical communication and risk communication. They analyzed the communication about the historical case of Port Chicago, and uncover rhetorical practices that were damaging to the safety, identity, and vitality of a community. On the basis of their analysis, they reflect on the role of the technical communicator in risk communication.

In the second article, Tammy Rice-Bailey reports on a first study

into the challenges experienced by technical communicators who work remotely from their audiences and project teams. She conducted a series of surveys and interviews among technical communication professionals who predominantly worked remotely as consultants for large U.S. corporate organizations, and inventoried the challenges they faced, including the total lack of direct contact with end users, problems with the access to information, difficulties in the work-life-balance, and a lack of social interaction.

The third article, by Hans van der Meij, continues a series of articles in this journal on the use of video instructions. In the 2012 volume, Jason Swarts published a first award-winning article on video instructions; in 2013, Hans van der Meij and Jan van der Meij published another award-winning article on the same topic. In this issue, Hans van der Meij reports on an empirical study with children as participants, which demonstrates the potential effectiveness of video instruction.

# Dangerous Neighbors: Erasive Rhetoric and Communities at Risk

Sam Dragga and Gwendolyn Gong

## Abstract

**Purpose:** The risk to the safety, identity, and vitality of a community is important for every citizen with a dangerous neighbor, be it military installations, oil refineries, nuclear power facilities, fertilizer factories, airports, or train stations. The historical case of Port Chicago—a failed relationship of a military facility and its neighboring civilian community—offers important lessons regarding the nefarious practice of erasive rhetoric and the missed opportunities for cultivating cooperation and communication.

**Method:** A critical review of historical records and pertinent communications from military and civilian sources uncovers a series of rhetorical practices damaging to the safety, identity, and vitality of a community.

**Results:** The language practices of name-changing, dismissive and derogatory descriptions, passive voice, negative claims, tactical omissions, and elaborate pejorative detail, separately and collectively, serve to fortify the source of danger while erasing the object of danger.

**Conclusion:** This provocative and still timely case challenges technical communicators to bring together officials from military, industrial, and transportation facilities with the residents of neighboring cities for instructive and productive interactions that generate trust, save lives, and preserve communities.

**Keywords:** dangerous neighbors; erasive rhetoric; risk communication; safe distance; community; taking

## Practitioner's Takeaway

- Citizens in neighboring communities are widely unaware of the risks to health, safety, and the environment created by military, industrial, and transportation facilities.
- Technical communicators possess the skills necessary to bring together communities and dangerous neighboring facilities for informative and cooperative interactions that build trust, avoid erasive rhetoric, share knowledge, and minimize risk.
- Historical cases such as Port Chicago serve as vivid reminders to technical communicators that their continuing conscientious efforts are important and necessary.

## Introduction

Across the world, the daily operations of military, industrial, and transportation facilities create potential dangers for their neighboring communities. The dangers might be physical, economic, psychological, or all of the above, putting at risk the ability of their neighbors to thrive. In this fragile relationship is a key opportunity for technical communicators to serve as a facility's representative to neighboring communities or as the voice of neighboring communities in their ongoing interactions and negotiations with military, industrial, and transportation facilities. Sensitive to the perils that rhetoric itself might generate, technical communicators could explain a facility's operating practices, advise neighboring communities regarding potential dangers, identify appropriate actions for local residents to take in a crisis or emergency, and encourage facility-community cooperation. Technical communicators serving as community representatives could give voice to the questions and anxieties of local residents, explain answers offered by facility officials, mediate disputes, develop accords and reciprocities, and cultivate joint missions and projects.

The opportunities we propose intersect obviously with the field of risk communication as it has evolved to emphasize industry-community relationship building (Fischhoff, 1995; Leiss, 1996) and the creation of a convergence of differing perspectives (Sellnow et al., 2009). The theory and practice of this field have developed on a foundation of community-right-to-know regulations, especially the Emergency Planning and Community Right to Know Act of 1986 (EPCRA) and its creation of Local Emergency Planning Committees (LEPCs) as well as the United Nations Economic Commission for Europe's 1998 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (more familiar as the Aarhus Convention). Studies across a wide array of disciplines (for example, biology, chemistry, communications, economics, education, engineering, political science, law, medicine, psychology, public relations, sociology) have guided the important efforts of risk communicators in addressing the multiplicity of hazards to health, safety, and the environment (for example, Heath & O'Hair, 2010; Morgan et al., 2011).

In spite of extensive regulations and research, however, the public is widely unaware and unappreciative of the risk information available to it regarding the dangers of neighboring facilities (Palenchar, 2008). The majority of citizens are typically inattentive to local industrial, transportation, and military activities unless a crisis occurs and allow little or no time in their daily lives to participate in public meetings or review published materials about potential dangers.

In a world of ubiquitous technological perils, technical communicators are thus vital to the effective explication of risk and the creation of productive and trusting relationships for communities and their dangerous neighbors. Technical communicators bring to this challenge extraordinary diversity of education and experience: knowledge of verbal and visual rhetoric, usability research, and participatory design as well as pertinent skills in analyzing audiences, interpreting and adapting quantitative and qualitative information from subject specialists in science and engineering for nonspecialists (and vice versa), and developing lucid instructions, policies, and warnings.

This article examines a historical case from a time prior to the rise of risk communication as a field. It is a case of a failed relationship—a cautionary case that is potentially as instructive for the field of technical communication as is the case of the Challenger (for example, Dombrowski, 1991, 1992, 1995; Moore, 1992a, 1992b; Winsor, 1990) and its lessons regarding interdisciplinary/intercultural communication, the impact of rhetoric and relationships of power on judgment and decision making, and the ethical obligations of communicating parties in conditions of urgency or uncertainty. (Also instructive on this score are Denise Tillery's studies of the communications related to the nuclear materials repository at Yucca Mountain, Nevada, and Beverly Sauer's examination of the rhetoric of mining operations and investigations in the United States, England, and South Africa.) The case we discuss here is little recognized, but it makes obvious the risks to communities from dangerous neighboring facilities and from rhetoric itself. It is a tragic case that also reinforces why community right-to-know initiatives are necessary and deserve the vigorous support of technical communicators.



## Dangerous Neighbors

On July 17, 1944, at the U.S. Naval Magazine at Port Chicago, California, a rapid pair of ammunition explosions killed 320, injured 390, and disintegrated vessels, vehicles, and buildings. The two explosions also injured 113 civilians and damaged every building in the adjacent unincorporated community of Port Chicago, a population of 3,000 located within two miles of the site of the explosions. No accident in the United States during World War II was as serious as that at Port Chicago. Following the subsequent repair and expansion of the facility, the Navy claimed a two-mile barrier from the piers was necessary to insure public safety. It proposed the taking of the city—a proposal that itself initiated a loss of residents and businesses in spite of wide and vocal civilian opposition. In 1969, the entire community of Port Chicago was appropriated: buildings were bought and demolished and residents were dispersed.

Across a 25-year period, successive generations of military officials and community residents engaged in addressing issues of risk, identity, visibility, safety, and vitality. The language practices of name-changing, of dismissive and derogatory descriptions, of passive voice and negative claims, of tactical omissions and elaborate detail, separately and collectively, served to fortify the source of danger while erasing the object of danger.

Using the research techniques characteristic of histories as well as of descriptive case studies (Yin, 2014, p. 12), this article incorporates primary and secondary materials in its examination of specific episodes that occurred in California in the period during and following World War II. In this research process, we examined military manuals and reports, newspaper articles, published books, and transcripts and audio recordings of interviews with witnesses, piecing together a lucid chronicle from the available sources. A close reading of the materials allowed us to 1) explicate the narrative and (2) identify and evaluate stylistic features in the language practices. From this contextualized historical critical perspective, we observed how the materials reveal a progressive pattern of erasive rhetoric—of wording and phrasing that ultimately contributes to the obliteration of Port Chicago.

The lessons for technical communicators from this salient case are clear and still timely: multiple opportunities for cooperation and communication were missed—opportunities that might have saved lives, avoided injuries, and preserved a community.

### Origins

California's Suisun Bay has a long history, from the Suisun people who thrived in the region for thousands of years, to the transient Spanish explorers and missionaries of the 1700s and the French, Spanish, and Russian fur traders of the early 1800s. Sitting at the intersection of two rivers, shielded by four islands, and enjoying a tide of eight feet, the south shore of Suisun Bay is especially suited for water transport. The Americans who arrived about 1851 with intentions of building a lasting community were focused initially on farming, ranching, and mining and were soon supported by trains as well as ships for the carry of cargo. A major lumber mill, factories, and smelting and petrochemical operations joined the community in the early 1900s, generating a growing vitality and diversity in the local economy. During World War I, this was a choice site for the building of freighters for the U.S. Navy (McLeod, 2007, p. 31).

This community identified itself in 1908 as Bay Point because of its location, and by 1918 included 250 families or 1500 people. Following the worldwide financial collapse of 1929 and its rippling impact across the United States, civic officials and business leaders in 1931 sought to invigorate Bay Point's torpid commercial activity through a change of name to *Chicago*. Their objective was to cultivate a wider reputation for industrial capacity and bring exciting new enterprises to the city. The U.S. Post Office, however, resisted the new name and the resulting compromise was *Port Chicago* (McLeod, 2007, p. 59; Rand, 2008, p. 30).

### The Arrival of the U.S. Navy

The 1930s were dismal years everywhere, including Port Chicago, but World War II brought a revival of economic activity. In 1942, the U.S. Navy established the Port Chicago Naval Magazine to serve as a transport facility (that is, rapid passage versus temporary storage) in support of the war effort. The magazine was located within two miles of the city. Ammunition of all kinds (including bombs, bullets, torpedoes, and mines) were brought to the magazine by freight trains and loaded on cargo ships for operations in the Pacific Ocean. The citizens of Port Chicago were pleased to support the war effort and pleased with the boost to the city's economy that the military facility supplied, but

virtually none were aware of the extraordinary risk to their community arising from the magazine's improper design, ill-equipped officers, and untrained sailors as well as the rhetorical effort to minimize the size, history, and tenacity of local civilian life.

Urgency was a key factor in the choice of location and the construction of the naval facility. In the summer of 1941, war was imminent. At the Mare Island Naval Shipyard (a facility created in 1852 twenty-five miles northeast of San Francisco for the design, building, and repair of ships), the ammunition depot was already at capacity. The director of the port at Mare Island advised the building of a new ammunitions transport facility at Port Chicago, declaring "The great value of this site is its complete isolation from habitation and industrial activity" (Allen, 2006, p. 38; McLeod, 2007, p. 69). This is the earliest occurrence of the dismissive and erasive rhetoric that will characterize the U.S. Navy's discourse regarding the community and its 1500 citizens.

The issue of proximity to the public was important because the location and condition of explosive storage facilities were monitored by the Joint Army-Navy Ammunition Storage Board, a committee of military officers created by the U.S. Congress in 1928 following the 1926 explosion at the Naval Ammunition Depot, Lake Denmark, New Jersey, which killed 21 people and injured 53 in addition to \$84 million in property loss and damage (Department of Defense, 2012). The Board adopted as its guide the American Table of Distances, a list published in 1910 by the explosives industry using available information compiled from 117 noteworthy accidents during the years 1854 to 1909 (U.S. Army-Navy Explosives Safety Board, 1945). The ATD specified safe distances to inhabited buildings from both barricaded and unbarricaded explosives, though waivers, exemptions, and deviations were allowed.

The United States declared war on December 8, 1941, and the following day a committee that was investigating potential sites for the expansion of naval operations—a committee that included the port director of the Mare Island facility—submitted its official proposal for a magazine at Port Chicago (Allen, 2006, p. 39; U.S. Navy, Bureau of Yards and Docks, 1947, p. 344). The necessary land for the facility was acquired and construction initiated by February of 1942. Ships were being loaded with ammunition by December. On opening day, the magazine comprised the following:

- a ship pier (500 feet long by 70 feet wide) for loading two ships at the time
- a barge pier
- 27 barricaded sidings for up to 203 railroad cars
- 9 storage buildings
- a boiler house
- a machine shop
- a fire pump house and electric shop
- a commissary
- 4 Barracks for enlisted (up to 232 each)
- a barracks for U.S. Marine guards
- a Magazine Administration Building (includes officers' quarters)
- a Naval Barracks Administration Building (includes officers' quarters, dispensary, and ship's service store) (U.S. Navy, Bureau of Ordnance, 1945)

The facility was never entirely satisfactory, however, developed as it was with temporary buildings principally on filled-in marsh land and thus subject to sporadic subsidence "so bad in the inert-storage area that it was necessary to abandon construction of one storehouse. As much as three feet of subsidence occurred in some of those which were built, entailing considerable extra work" (U.S. Navy, Bureau of Yards and Docks, 1947, p. 344). Repair and renovation were routine activities (U.S. Navy, Bureau of Ordnance, 1945):

After the first two months of operations, it became apparent that the loading platforms at the ships pier were too narrow for efficient and safe handling of ammunition. Consequently, in March 1943 the loading platform on the inboard berth was moved and joined to the outboard loading platform, thereby providing a 20 ft loading platform with resulting increased efficiency and safety. To accomplish this, one railroad track on the ships pier was sacrificed and the inboard berth no longer was available for loading. . . .

Anticipating an increase in tonnage to be loaded at Port Chicago in the future, recommendations were made in the spring of 1943 to construct a marginal wharf inboard of the first pier to accommodate an additional two vessels. However, no action was taken on this proposal until approximately November 1943, when the Commandant, Twelfth Naval District, visited Port Chicago.

## Dangerous Neighbors

As a result of this visit and apparent need of increased loading capacity at Port Chicago, construction of the marginal wharf was expedited. Meanwhile, as an expedient to get two berths in operation at pier #1 in the shortest possible time, it was concluded to widen both the inboard and outboard berths ten (10) feet each, thereby permitting 20 feet loading platforms at each berth and enabling two ships to load simultaneously.

Work on this widening was instituted shortly thereafter with loading operations continuing at one berth while the other was being widened. The widening of the berths was completed so that two ships could be simultaneously loaded for the first time on 10 May 1944.

Later it would be acknowledged that the renovations raised efficiency but also the level of risk: “When loading two ships simultaneously, there was considerable crowding and congestion on the pier” (U.S. Navy, Court of Inquiry, 1946, p. 1207).

Meanwhile, a March 1943 letter to the Secretary of War and the Secretary of the Navy from the Joint Army-Navy Ammunition Storage Board cautioned that the American Table of Distances (the basis of existing safety regulations) was without adequate scientific foundation and urged immediate testing to assure greater accuracy (Freund, 1978, I: 12).

None of the potential dangers arising from the original defective design and continuing changes to the facility were communicated to local civilians. And the facility was growing in the scope of its operations. A second two-berth wharf was under construction in the summer of 1944 and land for a third was being acquired—extensions that would double and triple the number of officers and officers’ quarters, of enlisted sailors and barracks, of auxiliary buildings and barricaded sidings (U.S. Navy, Bureau of Yards and Docks, 1947).

In addition, the majority of the officers assigned to the magazine were activated reservists or entirely new—new to managing enlisted sailors, new to working with ammunition, and new to the loading of ships. Their training for their dangerous jobs was inconsistent and improvised: it might include taking classes in office duties related to shipping, observing activities at Mare Island, visiting commercial shiploading

facilities, or working with experienced officers. It might also include “a course of instruction at Great Lakes [a training facility] in negro psychology” (U.S. Navy, Court of Inquiry, 1946, p. 1203). Because of the segregation of the military at the time, all of the enlisted sailors loading the ships but none of the officers were African American, creating greater opportunities for miscommunication, misinterpretation, and miscalculation. The inexperienced and ill-trained officers would yield to pressure to load ammunition as quickly as possible: each division’s average rate of loading was tracked on a bulletin board and incentives (positive and negative) offered to the sailors to stimulate competition and encourage efficiency, with wagering among the officers (Allen, 2006, p. 48).

Equally dangerous itself was the decision to utilize inexperienced African American sailors to unload the ammunition from trains and load it on ships instead of hiring civilian stevedores to do the job. While civilian winch operators must have years of experience with ordinary cargo to qualify for the loading and unloading of explosives, none of the sailors were experienced with operating winches and were given a single week of training (and ad hoc training thereafter). Ammunition was loaded 24 hours a day in three eight-hour shifts for three consecutive days, followed by a day of barracks duty, followed by three consecutive days of loading, followed by a day of liberty (Allen, 2006, pp. 46-47). The sailors were ill-equipped, working without clear and consistent instructions, as the entire ammunitions transport process operated without official regulations or guidelines. As the later investigation would acknowledge (U.S. Navy, Court of Inquiry, 1946, p. 1207), the only instruction manual was that available from the U.S. Coast Guard and published in October 1943: *Regulations Governing Transportation of Military Explosives on Board Vessels during the Present Emergency*. This is a 55-page pocket-size book (approximately 3 X 6.5 inches) with tiny text printed on thin paper: the ink on both sides of the page is visible, making laborious the physical process of reading. The regulations are written as paragraphs in passive voice without illustrations, making interpretation of the instructions a challenge (see Figure 1).

Note that rhetorical techniques for user-friendly instructions were readily available and widely practiced. For example, *A Handbook for Air Raid Wardens*, published in 1942 by the U.S. Office of Civil Defense,



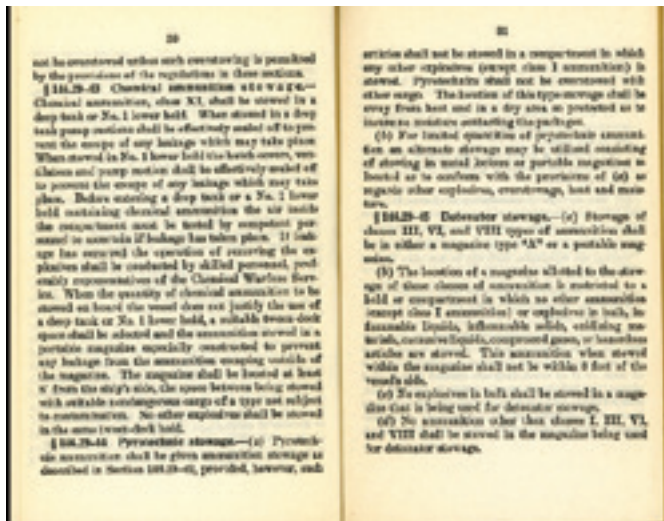


Figure 1. Representative Pages from the Coast Guard's 1943 Regulations Governing Transportation of Military Explosives

displays instructions in numbered and alphabetized lists with adjacent pictorial illustrations. Serial illustrations are also integrated, as are icons in tables of information for quick access with little reading (see Figures 2 and 3). Earlier manuals of the U.S. Coast Guard (for example, the 1921 *Instructions for United States Coast Guard Stations*) included pictorial illustrations, making their omission from the 1943 explosives manual altogether curious and tragic (a related bibliographic issue that itself deserves investigation). And the U.S. War Department published a wide array of technical



Figure 2. Pages from the U.S. Office of Civil Defense, *A Handbook for Air Raid Wardens*, 1942, Displaying Numbered Instructions, Pictorial Illustrations, and Serial Illustrations

NAME AND SYMBOL	CLASS	TOXICITY	PHYSICAL STATE	FUNCTION	TEST AND IDENTIFICATION	PROTECTIVE MEASURES
HYDROGEN CYANIDE (HCN)	AL	1	Gas	Asphyxiant	See text for details	See text for details
PHOSGENE (PG)	AL	2	Gas	Asphyxiant	See text for details	See text for details
CHLORINE (CL)	AL	3	Gas	Asphyxiant	See text for details	See text for details
BROMINE (BR)	AL	4	Liquid	Asphyxiant	See text for details	See text for details
CHLORINE PHTHALOGENE (CP)	AL	5	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	6	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	7	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	8	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	9	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	10	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	11	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	12	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	13	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	14	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	15	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	16	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	17	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	18	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	19	Liquid	Asphyxiant	See text for details	See text for details
DIETHYL HYDROLYSABLE PHOSPHORIC AMIDE (DHAP)	AL	20	Liquid	Asphyxiant	See text for details	See text for details

Figure 3. Page from the U.S. Office of Civil Defense, *A Handbook for Air Raid Wardens*, 1942, that Displays a Table of Information Using Icons to Simplify and Minimize Reading

manuals during this period that incorporated annotated pictorial illustrations and numbered and alphabetized lists of instructions (see Figures 4, 5, and 6).

While a manual of lucid pictorial instructions for the loading and unloading of explosives could thus have been designed and distributed, the reduction of risk to the lives of the sailors—and civilians in neighboring communities—was neither as vital nor necessary to the operation of the facility and the operation of the war as were urgency and expediency in getting the explosives to sea.

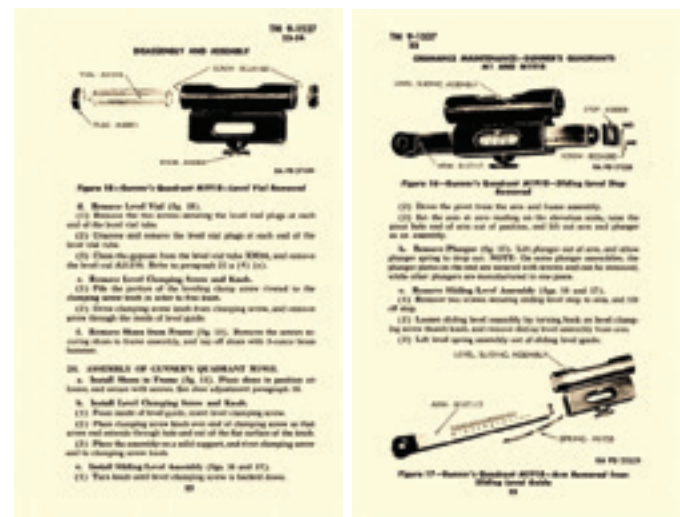
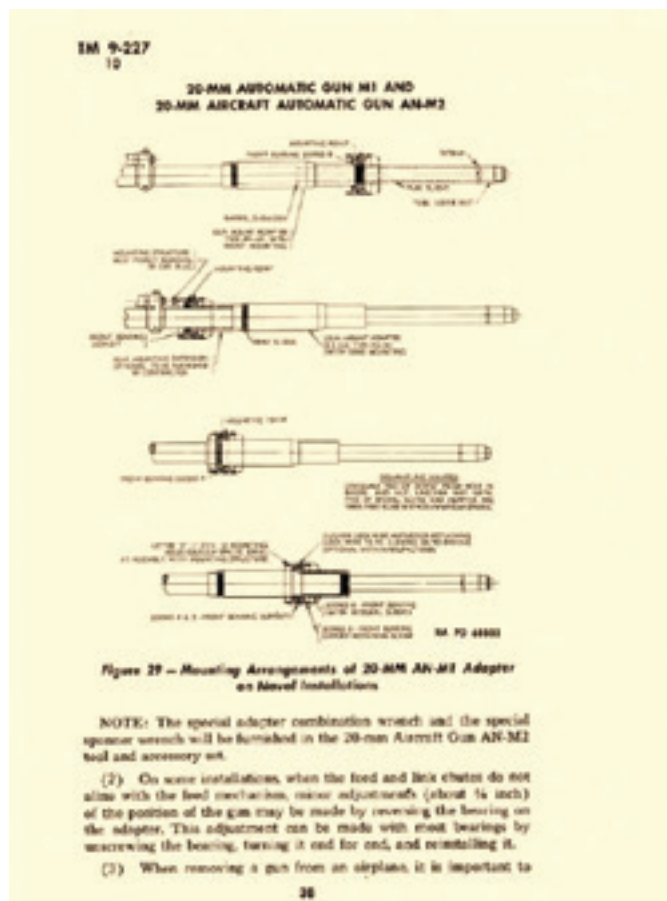


Figure 4. Pages from the U.S. War Department, *Ordnance Maintenance Gunner's Quadrants MI and MI 918, Technical Manual No. 9-1527*, 1943, Displaying Listed Instructions with Labeled Illustrations



## Dangerous Neighbors



**Figure 5. Page from the U.S. War Department, 20-Mm Automatic Gun M1 and 20-MM Aircraft Automatic Gun AN-M2, Technical Manual No. 9-227, 1943, Displaying Listed Instructions with Labeled and Annotated Illustrations**

In addition, naval officers considered the regulations of the Coast Guard's manual to be only advisory and ordinarily adapted or ignored instructions (for example, allowing bombs to be dropped and rolled instead of carried). Neither was the Coast Guard allowed to monitor or regulate safety practices at the magazine as it ordinarily would at sea transport facilities (Allen, 2006, pp. 45-46).

To summarize, this was a defective transport facility being operated without necessary regulations or appropriate monitoring by inexperienced officers managing individuals untrained for dangerous duties—conditions that would never have been allowed were the facility in a major city. A disaster was looming, a disaster anticipated by the sailors loading the ships but to which their officers were inattentive, a disaster of the military's making during a time of war in disregard for



**Figure 6. Page from the U.S. War Department, 20-Mm Automatic Gun M1 and 20-MM Aircraft Automatic Gun AN-M2, Technical Manual No. 9-227, 1943, Displaying Listed Instructions with Illustration of Object and Hands of Human Operator**

African American lives and the safety of neighboring civilian communities. It was as though the promised “isolation from human habitation” of the Port Chicago Naval Magazine was perceived by military officials as permission to engage in negligence: that is, erasive rhetoric inspired erasive action.

It is also important to note that this inattention to safe practices persisted following a notorious explosives accident on September 17, 1943, at Naval Operating Base Norfolk in Virginia. In this accident, 24 aerial depth charges (that is, anti-submarine weapons) were being rapidly transported by a single truck pulling four trailers (with six canisters to a trailer instead of the usual four) from the piers across the station's airfield taxiway to the ammunition magazine: 40 were killed and 386 injured. And, again, on November 16, 1943, six people (five African American) were killed in a



**Figure 7. Official Photograph #NH96821 of Damage at Port Chicago Naval Magazine, View Looking South from Pier**

horrific explosion at the Yorktown Naval Mine Depot (a weapons production and storage facility), while moving weapons inside a storage building of only 500 square feet that housed approximately 100,000 pounds of volatile materials.

## The Explosions

With the conditions for disaster thus established, on the night of July 17, 1944, two explosions (at 10:18:47 p.m. and 10:18:54 p.m.) would leave 320 people dead and 503 injured and cause damage for miles in every direction (see Figures 7 and 8).

At the time, two ships were at the pier. The *S.S. E.A. Bryan*, a cargo ship of the Liberty class on its second voyage, was being loaded with projectiles, bombs, and cartridges. Earlier in the day, critical repairs were made to two of its five winches. The *S.S. Quinault Victory*, a cargo ship of the Victory class on its first voyage, was newly arrived at the pier and was being rigged for loading. Sixteen railroad cars filled with explosives were on the pier.

It is impossible to know the immediate cause or causes of the explosions as every human being within 1,000 feet was killed and almost all of the pertinent physical evidence obliterated. The *Bryan* was in slivers, the *Quinault Victory* in sections inverted in the water 500 feet from its original position; the railroad cars were twisted pieces of sizzling debris, while the pier vanished altogether (Allen, 2006, p. 64). Of the 320 killed, the



**Figure 8. Official Photograph #NH96823 Of Damage At Port Chicago Naval Magazine, View Looking North Toward Pier**

bodies of only 51 could be identified: we believe it is important to include their names here in their memory (see Table 1 and Table 2).

Losses exceeding \$9 million in military property included damage to buildings, fences, roads, railroads, tanks, power and water systems, telephone service, automotive equipment, machinery, and tools (U.S. Navy, Court of Inquiry, 1946).

In the community of Port Chicago, the losses were also striking. Injuries were both major and minor (see Table 3). Of the civilians injured, 53 would file claims for compensation totaling \$121,000. Property loss averaged \$1,000 and included shattered windows, collapsed walls and ceilings, and ripped utility lines: 650 buildings were damaged—each of the community's 450 homes as well as stores, barns, schools, and churches (Rand, 2008, p. 44).

The residents of Port Chicago were uninformed about the potential hazards created by their military neighbor and were untrained for disaster: their ignorance would have tragic consequences. The first-person reports of multiple survivors indicate that they did not immediately drop to the ground or seek shelter after hearing the first explosion but looked out a window, opened the door to the house, or walked outside to investigate the noise and were injured by flying glass and debris from the second explosion seven seconds later (Rand, 2008, p. 38). For example, according to survivor Keith Grover,

## Dangerous Neighbors

Monday evening July 17, 10:19 p.m., the family was all in bed and I was quietly reading by the radio when suddenly the lights flickered and went out. Immediately there was a tremendous jarring explosion, and it flashed through my mind that something had blown up down at the base. I walked to the front door and looked out and there, down at the base, were great flashes of lights and streaks of fire going high in the sky like rockets.

Suddenly the whole sky was a sheet of white flame and the whole world seemed to be ripped apart by a sound so great and terrifying that it defied description, something like thunder real close, multiplied a hundred times, accompanied by a great rending sound.

I felt the air press on me from head to foot, then squeeze like a giant hand and I had a sensation of being roughly handled and the next thing I knew I was on the floor choking from the dust. I guess I was partly blown and partly shaken down. (Rand, 2008, pp. 52-53)

Of the 320 killed, 202 were the African Americans loading ammunition. While officers were given thirty days of survivor's leave, none of the African American sailors were awarded release time, including individuals who were injured in the explosions, who were in obvious shock thereafter, or who courageously joined in the evacuation of the injured, the search for bodies, and salvage and repair efforts. Several divisions were transferred temporarily to military facilities in the region.

## Investigation of the Explosions

The official naval investigation of the disaster was initiated on July 21—a three-officer Court of Inquiry that would take till October 30 to question witnesses, examine all evidence, and issue a report of its findings, conclusions, and recommendations.

Meanwhile, the war was ongoing and the loading of ammunition was still vital. The resumption of operations at the Port Chicago Naval Magazine and a major expansion of the facility were announced by the U.S. Navy within a week of the explosions, still without knowing the cause or taking the remedial actions necessary to avoid equally catastrophic consequences.

On August 9, the surviving African American sailors, transferred to the Mare Island facility following the explosions, were directed to load ammunition; still in stress and believing that the existing loading practices were unequivocally dangerous, 258 declined. The court martial and discharge of 208 and the extraordinary joint trial and conviction of 50 for mutiny constituted the immediate rhetorical environment of September and October of 1944—the time in which the official investigative report on the Port Chicago explosions was being written by the three naval officers. (For a picture of the wider rhetorical environment of the period, Neil Wynn's *The African American Experience during World War II* is essential reading.)

In a noteworthy exercise in erasive rhetoric, the Court of Inquiry's report acknowledges the defective design of the facility and the inadequate training of officers but reserves its harshest criticism for the African American sailors:

**Table 1. List of Identified Dead from the 1944 Port Chicago Explosions** (Source: U.S. Navy, Court of Inquiry, 1946; Allen, 2006, pp. 153-154)

<b>U.S. Navy and U.S. Naval Reserve</b>  <b>Officers:</b> <b>U.S. Naval Magazine, Port Chicago</b> Christenbury, John Boyd Johnson, James Basil Mordoh, Gilbert Wood, Harold A. <b>U.S. Naval Barracks, Port Chicago</b> Anderson, Maxie Lee Schindler, Roland White, Raymond Robert	<b>Enlisted Personnel:</b> <b>U.S. Naval Barracks, Port Chicago</b> Bailey, Henry William Born, James Henry Bowden, L.T. Coffee, Eugene, Jr. Coley, Enos Gabriel, Gerard Hamilton, A.D. Harrison, Phillip Harold Hill, Cluster Hudson, Earl Howard Hughes, Glen Hughes, Leroy	Hunt, Ross Dee Jackson, Levi Randol Jennings, Willie Johnson, Clarence Johnson, Gabe Johnson, Milton Frank Law, Willie, Jr. Long, Lemuel McKinley Mathews, Lawrence, Jr. Mayfield, Charles Alvin McFarland, Clarence K. Miller, Otis Kenneth Nettles, Willie Person, Joe Herman Sanders, Robert	Sims, Willie Smith, Isaac Ebenezer Walker, Walter Lee, Jr. Warren, William Claude Washington, James L. Williams, Mitchell Adelbert Woods, James Edward  <b>U.S. Marine Corps Reserve</b> Blanke, Elwin Arnold  <b>U.S. Coast Guard Reserve</b> Portz, Edward J. Sullivan, James C.	<b>Civilian Civil Service Employees Of The U.S. Navy</b> Zanarini, Fred  <b>U.S. Maritime Service</b> Henrikssen, Elis Thompson, Glen E. Widner, Louis J.  <b>Civilians</b> Bustack, Lawrence C. Halverson, Gundar Hunt, Thomas David
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**Table 2. List of Unidentified Dead from the 1944 Port Chicago Explosions** (Source: U.S. Navy, Court of Inquiry, 1946; Allen, 2006, pp. 154-158)

<b>U.S. Navy and U.S. Naval Reserve</b>	Felisbret, John Baptist Ferguson, Robert Lewis Fields, Clarence Sinclair Finney, Jessie Forkner, Matthew, Jr. Francis, Joseph Robertson Franklin, Ford Sumpter, Jr. Frazier, Artie James Froid, Elmer Bertie Gaines, Bennie Lanzie Gant, Elgar Gibson, John Samuel Gilbert, Jethero Glenn, Samuel Goudelock, Lewis Dennis Green, William Henry Grinage, Ross Burl Hamilton, Ernest Eugene Hamm, Emeral Hammond, George Russell Hannah, John Wesley, Jr. Hardaway, Joe Henry Harding, John Floyd Harris, B.C. Harris, Roscoe Alexander Harvey, Clifford, Jr. Hayes, George Washington Haywood, D.C. Hector, Douglas Lee Higginbotham, David Lee Higgs, Bobie Richard Hills, Joseph Hite, Charles William Holden, Rudolph Valenteen Holley, Stanford Holmes, Eldred Larue Howard, Ernest Milton Howard, Frank James Hughes, Theodore Lawrence Humphrey, William, Jr. Hunt, Wave Hunter, Rudolph Williams Ingram, Leroy Jackson D.C. Jackson, James Jackson, James Edward Mason Jackson, Paul Eugene Jackson, Robert Albert, Jr. Jackson, Samuel, Jr. Jamison, Daniel Lucas Johnson, Earl Thomas Johnson, Harold Johnson, Henry Lee Jones, Daniel Lancaster Jones, Ivery Lee Joseph, Henry, Jr. Kearney, Samuel King, Calvin King, Clifton Land, Verna	LaPorte, Sidney Joseph, Jr. Lawson, Cleo Leslie, Claudius William Lewis, Aaron Augustus Lewis, T.C. Lyons, Robert Makins, Beattie John Martin, Alonzo Froid, Elmer Bertie Massie, Daniel McClam, Mitchell Melton, Calvin Miller, Ernest Charles Miller, Ira, Jr. Moore, Marshall, Sr. Moore, Thomas Moore, William Paul Neal, Eddie Lue Nixon, James Henry Otey, William Houston, Sr. Packer, Auguster Paschal, William Floyd Peete, Robert Fulton Perry, Lester Lee Phillips, Alfred Pickett, Charles Porter, Houston Porter, McCoy Potts, David William Powell, Samuel Harry Preuitt, Joe Clarence Reid, Arthur, Jr. Rhodes, James Elton Richardson, Clyde Franklin Roberts, James Allen Roberts, Mango Robinson, Alphonse Robinson, Fred, Jr. Rogers, Eugene James Scott, Carl Clifton Saunders, Wesley Sheckles, Joseph Jackson Smith, James Parker Taylor, Ellis Tolson, Joseph Marcella Towles, Maxie Daniel Van Dunk, Norvin Lester Wade, Isaiah Walker, Charles, Jr. Walker, Woodrow Luther Washington, Woodrow, Jr. West, Daniel White, Joseph Bailey Whitmore, Arthur Wilson, Maryland Eugene Wilson, Oliver Wilson, Samuel David Wright, Walter Eugene Wyatt, Charles Edward	<b>Armed Guard— SS Quinault Victory</b> Albin, Jack L. Bergstrom, Delbert P. Bowman, Jack P. Hall, John Gibson Hovland, George D. Morrow, Andy Mulryan, William H. Myers, Henry J. Riif, Woodrow A. Risenhoover, Jacob D. Robinson, William R. Roedell, Charles H. Rose, Jay Jr. Ross, Otis Kyle Saint, Woodrow W. Sanders, Arnold T. Sang, Harold S.  <b>Armed Guard— SS E. A. Bryan</b> Causey, Wayland E. Cebella, Rudy J. Chase, Robert K. Chastain, Claude L. Gee, John Jefferson Hollandsworth, Clarence R. Muirhead, Kenneth H. Mulligan, Jesse W. Quick, Lloyd J. Setzer, Martin J. Singer, George H. Small, Lister L.  <b>U.S. Coast Guard and U.S. Coast Guard Reserve</b> Broda, Peter G. De Gryce, William O. Riley, Charles H.  <b>U.S. Civilian Civil Service Employees of the U.S. Navy</b> Hunnicut, Raymond V. Middleton, Harry A.  <b>U.S. Maritime Service</b>  <b>Crew Members of the SS Quinault Victory</b> Bailey, Robert D. Bartlett, Robert E. Bell, John D. Bentley, Frederick E. Cheney, Donald H. Crawford, Hugh E. Crist, Floyd F. Diede, Albert C. Durland, Wallace M.	Eulrick, Kenneth J. Falor, Burke E. Garrett, Eugene W. Hendricksen, Robert K. Justesen, Johannes M. Kannberg, Walter F. Keim, Robert E. Koeninger Joseph B. Mallery, Earl L. McDaniel, Lloyd K. Moen, Kenneth M. Morell, Robert S. Marinsky, Isadore E. Nelson, Roy L. Parsons, David R. Pearson, Mike Pinson, Ellis B. Potter, Richard V. Sandberg, Virgil R. Scott, Albert R. Skance, Lester S. Sullivan, Howard W. Sullivan, Robert J. Williams, John A.  <b>Crew Members of the SS E. A. Bryan</b> Andraschko, Elmer A. Arsenian, Albert A. Benhart, William C. Cacic, Martin M. Davis, Ray E. Denonn, Donald L. Dorsey, Thomas E. Falk, Geroge H. Franklin, Marcus J. Gilbert, Alfred B. Gilstrap, James R. Grange, Joseph D., Jr. Hayes, Fred Hutchinson, Delbert R. Jepsen, Peter C. Johnson, Charles A. Johnson, Clifford R. Lantz, Ralph A. Louis, John A. Malizia, Frank C. Maniago, Edward Nathan, Harry E. Porter, Jesse, Sr. Roberson, Richard D. Sangster, Aaron C., Jr. Shaw, Ellsworth M. Smith, Howard A. Suchan, Andrew Townsend, Robert F. White, Harding E. Witt, George H.
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## Dangerous Neighbors

These enlisted personnel were unreliable, emotional, lacked capacity to understand or remember orders or instructions, were particularly susceptible to mass psychology and moods, lacked mechanical aptitude, were suspicious of strange officers, disliked receiving orders of any kind, particularly from white officers or petty officers,

and were inclined to look for and make an issue of discrimination. For the most part, they were quite young and of limited education. (U.S. Navy, Court of Inquiry, 1946, p. 1203)

The report also makes extraordinary efforts to excuse the officers:

**Table 3. Examples of Injuries to Citizens of Port Chicago from 1944 Explosions** (Source: U.S. Navy, Court of Inquiry, 1946)

Injured	Description of injuries
Alden, Regina	Lacerations left upper eyelid, side of nose and cheek; scar tissue may be permanent.
Bedoya, Catherine	Cut left upper arm, back and behind left ear. Scars. No injury permanent.
Bedoya, Robert J.	Cuts on face, legs, body. Not permanent.
Bumganner, Evelyn	Back injury—not permanent.
Clark, Etta	Left eye removed. Cut left cheekbone, right shoulder, cut shin. Left cheek paralyzed. Minor cuts. Scars permanent.
Colvard, Carl E.	Lacerations and shock—not permanent.
Colvard, Myrtle	Three fingers cut to bone on left hand; may be permanent.
Dodson, Fannie L.	Shock and nervous prostration; not permanent.
Dunning, Mabelle	Right foot—broken bone; right leg and knee—cut, bruises, lacerations—no permanent injury.
Garcia, Carmen H.	Two lacerations of left elbow and left forearm. Nothing permanent except scars.
Garcia, John C.	Lacerations face and leg, right cheek; not permanent.
Gordon, Norma Rose	Puncture wound right forearm. May be permanent.
Hatcher, Robert A.	Cut below right gluteal fold and right leg—numerous lacerations about face, chin, right side. No functional impairment.
Hatcher, Robert David	Child – 5 years; Cut on back of head; suffering from shock—not permanent.
Hatcher, Wilma	Cuts on hands and arms; front tooth chipped—2 teeth loosened—not permanent.
Leath, Janice H.	Cut about face; puncture wound right foot; may be permanent scar.
Leath, William M.	Cuts on shin, outer forehead, left shoulder. Glass entered both eyes. May be some permanent change of vision.
Lichti, Robert L.	Lacerations face, right shoulder, left leg and over left eye. May be permanent injury.
Lichti, Genevieve	Slight cut above left eye—not permanent.
Lichti, Robert Jr.	Cut on top of head—minor—not permanent.
Matthews, W.P.	Nervous breakdown and bronchial asthma caused by shock and exposure—not believed permanent.
Paluhicki, Anna	Eye injury (left)—shock. May be partial loss of vision.
Schmidt, Adele	Cut over left eye—lacerations about left eye and bridge of nose. Probably nothing permanent.
Smith, Dewey	Injury to head and ear—probably not permanent.
Stebbins, Daisy E.	Cut back of left hand, left leg above knee, right forearm. Puncture wound below shoulder on right arm. Should not be permanent except scars.

Because of the level of intelligence and education of the enlisted personnel, it was impracticable to train them by any method other than by actual demonstration. Many of the men were incapable of reading and understanding the most simple directions. Division officers were responsible for the actual training of the men and they carried out their duties by personally instructing and demonstrating with the material being handled, the proper methods of procedure. The division officers attempted to impress on the men the need for care and safety, and the highly dangerous nature of material being handled. (U.S. Navy, Court of Inquiry, 1946, p. 1203)

The specificity of the rhetoric here (that is, detailing the failures of the sailors and the virtually heroic efforts of the officers) makes the disaster something isolated in time and space instead of systemic, a consequence of the inability of individuals instead of the ineptitude of the institution, and erases the potential perception that the naval installation itself might be a growing and inherent danger to its neighbors.

The effort to exonerate the officers is also achieved through tactical omissions. In its findings of facts, for example, the report makes no mention of loading competitions or wagering by officers with the exception of the innocuously worded “There was a record maintained and posted of the tonnage loaded by each division” (pp. 1208-1209). And the list of opinions declares “the posting of the amounts loaded by each division did not operate to increase the hazards of loading” (p. 1256). In its recommendations, however, the report curiously declares “the loading of explosives should never be a matter of competition” (p. 1261).

The report is also informative in its stylistic choices. In its finding of facts, for example, the report claims “the evidence does not show that there was any intent, fault, negligence, or inefficiency of any person or person in the naval services or connected therewith, or any other person, which caused the explosions” (p. 1198)—a negative assertion, typical of judicial inquiries, about the failure of the evidence instead of a positive assertion about the ability and integrity of individuals or the institution itself.

And though claiming to discover insufficient evidence of negligence in the finding of facts, the report includes in its list of recommendations that “the

methods used by commercial stevedores in loading explosives be carefully reviewed by competent persons and only those methods meeting acceptable standards of safety be permitted” (p. 1260)—a tacit admission of a conspicuous failure to institute necessary and appropriate practices.

And its positive assertions about safety training constitute horrific revelations of how extraordinarily ad hoc was the operation, how ignorant officers were of existing practice, and how sailors were made the unknowing human subjects of dangerous experiments:

He [the commanding officer] and his subordinates studied the various handling methods and gear in use by similar activities. They conducted experiments toward improving these methods and the gear used. From these studies and experiments a standard method of handling each item was evolved. In arriving at these standard methods, safety was given primary consideration. This program of study and experimentation was a continuing process. (U.S. Navy, Court of Inquiry, p. 1204)

The ambiguities of tactical omissions, negative claims, and passive assertions come together in the following telling paragraph:

Careless and some unsafe acts by individuals have occurred in the past. (The Commanding Officer, Naval Ammunition Depot, Mare Island, recognized this and issued timely memoranda and orders that such practices be corrected.) Unsafe practices and speed at the expense of safety were not permitted by anyone in authority. Efforts were made to determine the safest way, to make that method standard, and to have the work done carefully. (U.S. Navy, Court of Inquiry, 1946, p. 1207)

The initial assertion here leaves unidentified the “individuals” (sailors? officers?) engaging in dangerous behaviors. The only active voice claim in the paragraph comes in the parenthetical assertion that attributes awareness and indirect action to the commanding officer. The third sentence about “unsafe practices” might be easily misinterpreted as vindicating the officers (or “anyone in authority”), but it is a negative claim that acknowledges only the absence of official approval for dangerous behaviors instead of conscientious action

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to stop dangerous behaviors (as the commanding officer directed). And the final sentence is a positive but still passive assertion: following as it does the negative claim about “anyone in authority,” it implies that efforts to establish safety were authorized by appropriate officials but nevertheless leaves the agents of action anonymous: that is, who made the efforts in question is suspiciously unspecified.

In the later list of opinions “careless and some unsafe acts by individuals in the past”—a phrase that could apply to officers as well as sailors loading ammunition—changes to praise of the officers and reprimand only of the sailors: “a very sustained and vigorous effort was made to train these men [the African American sailors] in the proper handling of munitions. Despite this, there was a considerable history of rough and careless handling by individuals” (p. 1255). The liability of the officers is thus erased.

The report also adopts erasive rhetoric regarding the civilian community of Port Chicago. While injuries to the sailors were identified in the finding of facts strictly as “personal injuries,” the language regarding civilian injuries is dismissive and distrusting in its specificity: “personal injuries, superficial and permanent, to 113 civilians, of whom 69 have filed claims, 54 of the latter having designated damages in the total sum of \$121,999.04” (p. 1198).

The community itself is described as “remote from industrial facilities, in a sparsely settled area,” thus erasing its extensive history of commercial and social activity while also noting—without awareness of the obvious contradiction—that it is “served by two transcontinental railways” (p. 1199). The report later cites “the isolation of Port Chicago” and “the lack of adequate housing” (p. 1204), again minimizing the civilian community.

Also among the report’s 19 recommendations is that “a loading manual setting forth acceptable methods for loading each type of explosive item, and to include the gear to be used, be drawn up and promulgated” (p. 1260)—a telling admission of a failure to take obvious and fitting action. And the report again adopts erasive rhetoric as it details a process for the writing of this manual:

The board or committee to draw up such a manual should have representatives from the Navy thoroughly familiar with all components in use

and their structural weaknesses, representatives of the Navy and possibly from stevedoring firms, thoroughly familiar with loading, stowing, and rigging, and representatives from the Coast Guard familiar with the laws governing such subjects. (U.S. Navy, Court of Inquiry, p. 1260)

No mention is made of including officials from Port Chicago—the neighboring community most at risk of damage and injury from unsatisfactory loading practices. And no recommendation is made in the investigative report regarding risk communication with local civilian populations. The implicit message here of ignoring the citizens of Port Chicago as unimportant would later evolve to explicit proposals for the taking of the community.

Erasive rhetoric inspiring erasive action is also unambiguous in the legislation of the U.S. Congress that allowed no compensation in excess of \$3,000 (versus the usual \$5,000) for each military and civilian victim of the explosions (Allen, 2006, pp. 67-68). The fatalities, injuries, and damage from this disaster were thus minimized with a low ceiling for reparations. (A later civil suit, however, would yield a total award of \$390,000 to the heirs of 18 of the sailors killed [The New York Times, 1949]).

The U.S. Navy, however, did stop the practice of using only African American sailors for the loading and unloading of explosives. It issued in February of 1945 a 15-page *Guide to the Command of Negro Naval Personnel* that affirmed a policy of integration: “The Navy accepts no theories of racial differences in inborn ability, but expects that every man wearing its uniform be trained and used in accordance with his maximum individual capacity determined on the basis of individual performance.” (If implemented only 15 weeks earlier, this policy would have disallowed the sweeping generalizations made in the Court of Inquiry’s report about the African American sailors at Port Chicago.) The new guide, however, denied the institution’s liability for earlier racial incidents:

Rumor and misunderstanding have contributed most seriously to public criticism of the Navy’s policies and practices regarding the Negro. They have also been a critical factor in every instance of racial tension leading to incidents requiring disciplinary action. Investigation of such incidents

suggests that in every case prompt action to check rumor and misunderstanding by seeing to it that the full and true circumstances were known to the men would probably have prevented or minimized open disturbance and restored morale during the period while any needed corrective administrative action was being taken. (U.S. Navy, Bureau of Naval Personnel, 1945)

This assertion reinforced the erasive claim in the Court of Inquiry's report: "The ordnance battalions were administered and trained in the same manner as are all other enlisted men in the Navy. There was no discrimination or unusual treatment of these men" (U.S. Navy, Court of Inquiry, 1946, p. 1204).

### The Expansion of the Naval Magazine

Meanwhile, the repair and aggressive expansion of the Port Chicago Naval Magazine was proceeding. The facility on Suisun Bay, the tidal area, swelled from its original 640 acres to 1,170, from 1,000 sailors to 4,500. The first of its three new two-berth piers was operating by early October of 1944, the second by January of 1945, and the third by April. The new inland area for ammunition storage was also operating by January of 1945: it occupied 6,300 acres located three miles to the south and was joined to the tidal area by a dedicated military highway and railroad (U.S. Navy, Bureau of Ordnance, 1945).

In July of 1945, a technical report to the newly titled Army-Navy Explosives Safety Board (previously the Joint Army-Navy Ammunition Storage Board), examining accidents from 1910 to 1944 (including the Port Chicago disaster), cautioned that the established guidelines regarding safe distances from explosives storage facilities to inhabited buildings were insufficient:

. . . the unavoidable concentrations of explosives at shipping points and ports of embarkation may necessitate the presence of many millions of pounds of high explosives at a single such location with the corresponding increased hazard to the public and to public property. And since safety distances for the public are at present based almost exclusively on the American Table of Distances, the possibility of a major catastrophe is by no means negligible. The safety distances prescribed

by the British War Office recognize this situation and (where great concentrations are involved) require from 3 to 4 times the distance required in this country. (U.S. Army-Navy Explosives Safety Board 1945)

It was thus clear to military officials that the rapid expansion of the Port Chicago Naval Magazine was putting the existence of the neighboring community of Port Chicago in growing jeopardy. Years of erasive rhetoric—of minimizing the community—would validate the looming erasive action.

By 1946, the Port Chicago Naval Magazine comprised the following:

#### Tidal Area

- 3 piers (6 berths)
- 1 barge pier
- Additional mooring facilities
- 40 barricaded sidings accommodating a total of 298 cars
- 9 Inert Storage Buildings
- Returned Ammunition Segregation Facilities
- Joiner Shop
- Battery Charging Building and Electric Shop
- Tidal Area Administration Building
- Pump House
- Civilian Employment Office and Labor Board Branch
- Civilian Lunchroom
- Miscellaneous shops and auxiliary facilities
- Dispatcher's Tower
- Incinerator
- Lumber Bearing
- 18 barracks for approximately 4,500 enlisted men
- 2 Commissary Buildings
- 2 Boiler Houses
- Officers' Quarters for approximately 74 officers
- Recreation Building (combined auditorium, movie theatre, and gymnasium, swimming pool, pool room, bowling alleys, exercise room, and Ships Service shops, soda fountain and store)
- Laundry and Dry Cleaning Buildings
- Brig
- Naval Barracks Administration Building
- Fire House
- Joiner Shop



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### Inland Area:

- 93 gun ammunition magazines
- 60 high explosive magazines
- 10 fuse and detonator magazines
- 6 black powder magazines
- 2 smoke drum magazines
- 1 Mk 8 depth charge test building
- 10 inert storage buildings
- 30 5-car high explosive barricades for 150 cars
- Surveillance Test Building
- Administration Building
- Marine Barracks for 300 (with self-contained recreation facilities)
- Dispensary and Dental Clinic
- Ships Building
- Locomotive Storage Building
- Paint shop
- Electric Battery Charging Building
- Field Office
- Storehouse
- Boiler House
- Civilian Lunchroom (U.S. Navy, Bureau of Ordnance, 1945)

In the brief period of only four years, the Port Chicago Naval Magazine easily eclipsed the civilian community of Port Chicago. The physical presence of the military facility was unequalled, its psychological presence pervasive. It established itself as the largest employer of the region with the greatest influence on economic, political, and social activities and aspirations. With growing restrictions on the storage and transport of explosives at Mare Island because of its proximity to San Francisco, the Port Chicago Naval Magazine would quickly develop as “the principal ammunition loading port and storage point for ammunition and high explosives on the Pacific Coast” (U.S. Navy, Bureau of Ordnance, 1945).

### The Zone of Safety

The expansion of the Port Chicago Naval Magazine persisted through the Korean War. By 1954 it employed 1,000 civilians, covered a payroll of \$5 million, and injected the local economy with \$1.5 million a year (Rand, 2008, p. 74). It was also transporting ammunition of fifty times the explosive power as it did during World War II. And military officials decided at

this time to declare the facility a danger to its neighbors, proposing to ring it with a safety zone of two miles in radius. That is, during the years that the ammunition depot was growing, the U.S. Navy attributed the facility’s dangers to unique and individual errors; at maturity, however, with the facility unrivaled in size and influence, military officials declared it a danger so serious that neighboring civilian communities would have to be dissolved and their residents dispersed.

As mentioned earlier, this notion of a “zone of safety” has its origins in the American Table of Distances created by the explosives industry and later adopted by the Joint Army-Navy Ammunition Storage Board (identified 1945-1948 as the Army-Navy Explosives Safety Board, 1948-1970 as the Armed Services Explosives Safety Board, and thereafter as the Department of Defense Explosives Safety Board—changes of title that also constitute erasive rhetoric, substituting the generic and the theoretical for the original vivid and material specificity).

Minutes of the Board’s meetings across a 50-year period (1928-77) make clear that

- the Navy has a history of unsafe practices including deficient conditions of facilities and violations of recognized safe distances (Freund, 1978, II: 18, 31, 32, 44, 45, 77, 86, 102, 104, 113, 125, 132, 134, 136, 148, 160, 167, 172, 175, 176, 179, 182, 183, 185, 187, 190, 193, 195-198)
- the Navy has a history of giving waivers and exemptions for “safe distance” specifications (Freund, 1978, II: 102, 104, 105, 131, 135, 136, 139, 148, 174)
- the designation of “safe distance” anticipates a degree of injury and property damage (Freund, 1978, II: 62, , 18083, 91, 96, 109, 111, 114, 120, 121, 189)

The records also prove that the specifications of “safe distance” have always been subject to continuing discussion and negotiation (that is, “safe distance” is a rhetorical creation instead of a scientific finding):

As problems arose and changes to the standards seem warranted, a pattern seemed to emerge. A Board-appointed work group quantitatively stated the problem, analyzed it, and made recommendations for its solution. Such efforts

were usually presented to the Board both as an oral presentation and written report. Modifications to the report were next made in an effort to achieve unanimous agreement by the Board members, followed by formal approval by each service. Where unanimous Board agreement was not forthcoming, a decision (subject to appeal) would be made by the Chairman. Thus, although reference may be made to Board standards for quantity-distance separation as adopted as of a specific date, long and often-involved study, discussion, and compromise decisions usually precede such rulings. Disagreements occur because data are frequently incomplete or ambiguous and service needs for mission fulfillment are often at odds with the Board's primary concern for protection to life and property. (Freund, 1978, I: p. 11)

The "zone of safety" proposed for the naval station at Port Chicago was thus a creation of choice: it was neither objectively determined nor stringently regulated, neither a universal standard nor without persistent exception. It was a considered exercise of erasive rhetoric.

### The Erasive Proposal

The U.S. Navy's proposal for the taking of Port Chicago generated animosity and anxiety and divided neighbor from neighbor. Residents opposed to the loss of their community were supported by their U.S. Representative, John Baldwin, as well as a wide array of regional organizations including the Chamber of Commerce of virtually every city in Contra Costa County, the Ninth District of the American Legion, the American Federation of Labor, and the Congress of Industrial Organizations. Their position was that the U.S. Navy ought to divest itself of its Port Chicago location because it contributed little to national security and constituted a growing danger to human life and economic vitality.

In 1956, however, the Navy tripled its effort:

1. Changing the name of the military facility to Concord Naval Ammunition Depot, thus severing the facility's association with the identity and history of Port Chicago.
2. Preparing to build 20 new ammunition storage magazines and a guided missile facility (for converting ships from conventional guns to guided missiles), thus choosing to grow the facility in spite of civilian opposition.
3. Asking the U.S. Congress in its 1957 budget for \$23 million with which to acquire all of the property in Port Chicago and immediately thereafter, without the funds yet authorized, opening a real estate office in the community to offer residents information and appraisals, thus making the acquisition appear already ordained.

The Navy insisted publicly again and again that the existing location of the ammunition depot was the only satisfactory location on the Pacific Coast, but the U.S. Congress directed that a study be made of all potential locations. This study was completed by Arthur D. Little, Inc., in 1957, noting the hazardous conditions at the facility in violation of 51 specifications of the Armed Services Explosives Safety Board but also advising that major renovations (and costs) would be necessary at each of the locations investigated. The study thus failed to give unequivocal support to civilian proposals for moving the ammunition depot to a new location, and the Navy declared its position vindicated by the study. In 1958, as a consequence, a multi-million dollar expansion program for the facility was initiated, including \$2 million for a missile storage facility, \$2 million for a state-of-the-art electronics testing building, and \$1.3 million in pier renovations (Rand, 2008, p. 95). Without the two-mile barrier it desired, the Navy issued a waiver for Port Chicago of the ASES guidelines.

### Taking Port Chicago

While the appropriations for 1957 failed to include the funds for the Navy's proposed acquisition of Port Chicago, the community was always thereafter in peril. The residents opposed to selling their houses and businesses were a shrinking majority, while a growing minority thought that selling would sooner or later be either judicious or necessary. Local historian and journalist Ken Rand records the division:

Merchants who wanted to sell were accused of "trying to salvage failing businesses." Those who led the fight to stay were called "big fish in a

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little pond who can't be successful other places." Boycotts, spontaneous or organized, caused some sell-the-town merchants to close. The save-the-town committee said most residents were "elderly home owners who are convinced they won't be paid enough for the property to buy elsewhere and besides, their roots are deep here and they don't want to move." (Rand, 2008, p. 81)

While the Navy's proposal was being discussed, studied, espoused, and disputed, its corrosive impact was rising. The proposal discouraged new businesses and people from moving to Port Chicago and encouraged a rapid exodus: from 1954 to 1958, business activity dropped by 30%, the population by 25%, and property values by 15 to 20% (Rand, 2008, p. 92). Potential residents as well as corporate executives and investors were unnerved by the Navy's continuing claims regarding the unique attributes of the Port Chicago location and the necessity of a two-mile barrier. Loans for houses and businesses were either unavailable or exceptionally restrictive. The community was restive and resistive, but it was also withering on the vine.

In 1963, the name of the military facility was changed again, this time to Concord Naval Weapons Station, thus erasing the specificity in its title and all associations with the facility's original identity and history. Residents of the civilian community as well as Baldwin's successor, U.S. Representative Jerome Waldie, persisted in their opposition to the taking, but appraisers from the Navy, in anticipation of funding for the taking, arrived in 1967 to assess the cost of residential and commercial properties—each appraisal a discouraging exercise of erasive rhetoric. Funding for the taking was approved soon thereafter, and on April 1, 1968 (the insulting and dismissive April Fool's Day) residents were notified of the opening of the Navy's real estate office to implement the acquisition of properties (Rand, 2008, p. 286). Hostility to the taking would be ongoing (as would objections to the prices being offered for properties), but ultimately sales were negotiated, resisting residents were evicted, and the community was leveled in 1969—25 years after the 1944 disaster.

### Communities at Risk

Port Chicago was a community put in jeopardy by a dangerous neighbor. In this case the neighbor

was military, but the risk could apply to cities with industrial facilities such as oil refineries or nuclear power stations or transportation facilities such as train stations and airports. It could as easily be the October 2010 toxic sludge spill from the aluminum facility in Hungary, that flooded the village of Kolontar, killing 10 of the 900 residents, injuring 150, and poisoning soil, water, and air, or the July 2013 72-car oil tanker train that derailed and exploded in Lac-Mégantic, Quebec, Canada, killing 47 people and incinerating 40 buildings in the village of 6,000.

The world in which we live is filled with technological risks, necessary and unnecessary. Following the April 2013 explosion at a Texas fertilizer factory in the city of West (population 2,800) that killed 15 people and injured 200, the Associated Press investigated the wider peril to communities across the United States from chemical storage facilities, discovering that the risk is as extensive as it is unexamined, with hundreds of thousands of people unaware of their living within a quarter-mile of a potential explosion, and thousands more children in schools, patients in hospitals, customers in stores, and employees on the job in buildings erected within the radius of a potential explosion—virtually all, including local police officers and fire fighters, uninformed or ill-informed about the potential danger (Cappiello, Gillum, & Plushnickmasti, 2013). And in case of explosion, and barring unequivocal malice or egregious negligence, the source of danger might be excused (because it operates in the national interest or it brings jobs or it is vital to the economy), while the disaster is attributed to tragic and unanticipated error, and the neighboring community is made the object of erasive rhetoric (for example, "only the desperate/deprived/derelict would live here") to decrease the price of reparations.

The case of Port Chicago with its several tragic consequences challenges us as technical communicators to cultivate a sensitivity to dangerous neighbors and erasive rhetoric as well as to realize that erasive rhetoric is the early warning sign of a growing and looming danger of erasive action and thus must be rapidly and continuously opposed. This case asks us to recognize that communities are typically multivocal, especially across time, and communicate with competing voices while dangerous neighbors strive for the rhetorical power of univocality. This case encourages us to assist

communities in developing their single voice (or choir) and to assist dangerous neighbors in thoroughly examining all the strains joined in their single voice. It is a case that drives us to be neither timid nor hostile, neither submissive nor self-righteous, but to be writers and editors of humility and courage who interrogate the implicit policies and tacit practices that put people in jeopardy, who solicit candid answers to incisive questions, who create opportunities for cooperation and communication using available technologies, who bring together local residents and officials from military, industrial, and transportation facilities for instructive and productive interactions that generate trust and minimize risk. This is the job for which we are equipped. This is the way we as a field might truly memorialize the victims and serve the survivors of all the world's dangerous neighbors.

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# Remote Technical Communicators: Accessing Audiences and Working on Project Teams

Tammy Rice-Bailey

## Abstract

**Purpose:** This pilot study investigates challenges experienced by technical communicators who work remotely from their audiences and project teams and identifies factors that contribute to success in these work arrangements.

**Method:** I surveyed and interviewed seven technical communicators who worked remotely as consultants for large U.S. corporate organizations, including two Fortune 500 financial services companies, a professional services firm, and a safety certification organization. No participant performed more than 15% of her work on-site. Each participant had a minimum of three years' experience working remotely and had previous experience working as an on-site technical communicator for other organizations. The surveys and follow-up interviews provided qualitative data, which I then coded and analyzed.

**Results:** Unlike local technical communicators, who may have limited contact with their end-user audience, these remote technical communicators had no direct contact with their end-user audience and instead relied on other in-house and remote team members (such as project managers) to provide audience information. The remote technical communicators reported facing challenges such as lack of social interaction; inability to stop working; and a lack of information and resources. They reported using various skills and strategies to cope with challenges, citing communication, self-discipline/motivation, and organization/structure the most frequently.

**Conclusion:** Given the trend of organizations choosing to outsource writing and training jobs and hire consultants to take on these roles, technical communicators should acquaint themselves with the potential challenges of working on a remote team. Study participants reported such challenges as difficulty building trusting, new relationships; missing out on small talk and sometimes even critical conversations; and feeling isolated.

**Keywords:** remote; technical communicators; challenges; consultants; project teams

## Practitioner's Takeaway:

- Partnering with team members, especially SMEs and project managers, is essential to the remote technical communicator (TC) since team members are often those with access to the end-user audience.
- Remote TCs should expect to be creative in building and maintaining work relationships.
- When TCs work remotely, they may need to develop strategies to cope with feelings of isolation.
- When TCs do not have a physical presence in an office, they may miss out on critical conversations and should find alternate ways to stay connected to people and projects.

## Remote Technical Communicators

### Introduction

Four years after I started working as a technical communication consultant for a Big Four accounting firm, I was still having difficulty accessing the audiences for my training documents and feeling like a member of my project teams. Having previously spent more than a decade working as an on-site technical communicator (TC) for corporate offices of other Fortune 500 companies, I was puzzled at the extent of my current challenges. I was curious to learn if these problems were representative of the experience of other remote TCs, and if so, how they dealt with them. I began my inquiry by consulting recent technical communication scholarship and by conducting a pilot study of remote TCs.

Over the past decade, technical communication scholarship has taken a closer look at the challenges that technical communicators face in the workplace and the related skill sets needed to address these challenges (Barker & Poe, 2002; Brizee, 2008; Carliner, 2012; Slattey, 2007; Smart & Barnum, 2000; and others). Readers of *Technical Communication* will be familiar with such conversations as the challenges of working as independent consultants and working within cross-functional teams. What we know less about are the additional challenges unique to TCs who are physically distant (working remotely) from their audiences and work groups. To date, these areas have not been fully explored. Anecdotally, we may be aware of some of the issues with which remote TCs must contend, but there is little research to support these accounts. Empirical, qualitative data regarding remote technical communicators is lacking. Most of the scholarship remains focused on local TCs, that is, TCs who are physically located at some workplace where they have varying degrees of direct exposure to their audiences and work teams.

Only within the past several years have studies started to examine the situation of the remote writer (Larbi & Springfield, 2004; Turetken et al., 2010), that is to say, the writer who works offsite (typically from home), has limited connection with her project team and limited to no exposure to her audience. Scholars have begun to focus on independent consultants (Barker & Poe, 2002) or freelance writers (Brady, 2011), many of whom work remotely. At the same time, the digital workplace has created a pressing exigency to look at these TCs

who are physically separated from both their audiences and their project teams. In the United States, there is a growing trend among organizations to hire employees who telecommute, to outsource writing and training projects, and to subsequently hire contracted workers to perform writing and training tasks. After considering “STC’s U.S. Independent Contractor/Temp Agency Survey,” Barker and Poe (2002) explain, “the model of contingent employment is becoming a dominant model among employed writers within most organizations” (p. 151). In light of this trend, our field would benefit from examining these distance work arrangements and their implications for TCs.

To address the need for more empirical data on the relationship between remote TCs and their project teams and audiences, I developed a pilot study to investigate remote technical communicators (TCs) and their relationships with their audiences and project teams. This study was concerned with the primary question: *What are the work experiences of remote TCs?* I approached this question via three more concentrated research questions, which my surveys and interviews were written and structured to address. These questions were:

1. How do remote technical communicators (TCs) report obtaining information about their audiences?
2. What unique challenges do remote TCs report facing?
3. What skills do remote TCs identify as necessary for their workplace success?

### Technical Communicators and Audience

In their review of recent scholarship, Spilka and Blakeslee (*Audience Work*, book manuscript in progress) find that audience remains a primary concern for TC practitioners and continues to be at the core of what TCs do. They point out that TCs continue to be “audience advocates” and continue to add quality to industry in ways others cannot due to their knowledge and understanding of the audience. However, we have limited knowledge about how remote TCs function, either theoretically or practically, as audience advocates. In instances where representative audience members are not available to interview, as would presumably be the case for the remote TC, how would that TC obtain information about the audience?

Would the TC simply construct the audience? After all, constructing one's audience is a method of audience analysis that has been covered in TC scholarship since the mid-1970s. Much technical communication scholarship through the early 1980s focused on the role of the writer in manufacturing the identity of the audience, and a number of writers at this time (Long, 1980; Ong, 1975; Selzer, 1992; and others) emphasized audience as a construction of the writer.

What about the importance of contact with actual, representative audience members? Starting in the late 1980s, technical communication scholarship (Blakeslee, 2001; Faigley, 1985; Mirel, 1998; O'Dell, 1985; Spilka, 1990; and others) pointed to the importance of considering the social and contextual components of the audiences and of taking into account that context shapes an audience's needs. As O'Dell pointed out, that the process of composing "may entail a great deal of social interaction" (250). Would scholarship of these previous decades accurately explain how remote technical communicators (TCs) obtain information about their audiences?

### Challenges of Technical Communicators

Aside from the challenges they face working as independent consultants or on cross-functional teams, remote TCs face an added multitude of issues both related to working alone and to being separated from their work teams. Scholars cite cooperation (Brizee, 2008); collaboration (Brizee, 2008; Fisher & Bennion, 2005; Rainey, Turner, & Dayton, 2005); communication (Robey, Khoo, & Powers, 2000; Smart & Barnum, 2000); and complexity of the work (Slattery, 2007; Smart & Barnum, 2000) as issues for the remote TC. However, the most widely recognized challenges faced by remote TCs are the lack of proximity and face-to-face time with their work team. The absence of these can result in isolation (Larbi & Springfield, 2004) and a lack of sense of community (Fisher & Bennion, 2005). Larbi and Springfield explain that we were so eager to trade in cubicles for electronic communication that we "underestimated the impact and necessity of physical reality" (p. 102).

### Success Factors for Technical Communicators

Scholars have started to look at what constitutes success for the remote TC and have identified the importance of soft skills (Larbi & Springfield, 2004),

especially communication; previous experience or face-to-face time with team (Robey et al., 2000; Turetken et al., 2010); and familiarity with technology (Slattery, 2007). This familiarity is particularly important because, as Slattery tells us, the creation and management of digital documents can be quite complex, and TCs are "spending shorter amounts of time looking at more and more texts" (p. 313). Brizee (2008) adds that collaborative discourse practices "can be complicated by the technologies and physical distances so interwoven in today's project management" (p. 366). Turetken et al. (2010) note that the availability of richer communication media leads to more successful telecommuting.

## Methods

From August through December 2011, I conducted a pilot study to look at some of the ways remote TCs communicated with their audiences and interacted with their project teams. This section describes my recruitment methods, participants, and research questions. It also covers the process by which I administered the surveys and interviews and the method I used to code and analyze the responses.

### Recruitment and Participants

In this IRB-approved research study, I surveyed and interviewed seven remote TCs, each of whom had a minimum of three years' experience working remotely. I selected this method of data collection over a single in-depth case study because my goal was to examine multiple perspectives from multiple professionals in various industries. My participants included seven remote TC consultants who were contracted with four large corporate organizations, two of which were Fortune 500 Financial Services Companies. These instructional designers were not employees of the organizations for which they worked. They were external, independent consultants who were contracted to these four corporations during the lifecycle of at least one project. I used referral sampling to recruit participants. These participants were referred to me by a partner at the global consulting firm that placed the consultants. When I requested participants, my only requirements were that they worked remotely and that writing was one of their primary responsibilities. The length of time that the participants had been working



## Remote Technical Communicators

remotely ranged from three to ten years. Table 1 lists the participants (by pseudonyms), the industry in which they worked while participating in the study, the number of years they worked in their field before becoming a remote TC, and the number of years they have been a remote TC.

### Surveys and Interviews

Each participant completed two surveys over the four-month period. These surveys were intended to capture the participants' impressions on how they conceived of and interacted with their audience members and teams. The second survey was administered approximately four months after the first, and some of the questions from the first survey were repeated on the second. Approximately two weeks after I received each completed survey, I interviewed that participant by phone for roughly 30 minutes. Each of these semi-structured interviews responded to the preceding survey and enabled me to collect more in-depth responses to the initial survey responses. These interview questions were based on how participants responded on the first survey and were intended to obtain clarification and further detail about their interactions with their remote teams and audiences. See the Appendices for copies of these surveys.

### Coding the Responses

I coded the responses to the surveys and interviews to group them into common themes using the Hughes and Hayhoe (2008) method of defining codes at the word or phrase levels. The nature of the open-ended questions allowed participants to give more than one answer to each question. In cases where participants gave extended answers, I extracted as many themes

as the response contained and coded accordingly. For this reason, the number of responses to a particular question often exceeds the total number of participants. However, if one participant's response contained two or more references to the same theme, I counted the multiple references as a single instance. Table 2 gives an example of this coding. The left column contains the question; the middle contains responses from participants; and the right column shows the code(s) I assigned to the responses.

## Results

Participants were asked to respond to several open-ended questions over the course of two surveys and two follow-up interviews. After providing a brief overview of the major findings, this section addresses the results of these questions, as I have coded and organized them into various themes. I have included several participant comments to illustrate more fully the responses I received. Specifically, five of the seven participants reported that they *never* interacted with members of their target audience. Six of the seven participants noted that a major challenge to working remotely is making and maintaining connections with others. And three or more participants listed major success factors to working remotely as communication, self-discipline/motivation, and/or organization/structure.

Overall, remote TCs had little to no direct contact with their end-user audience and instead relied on other remote team members (such as project managers) to provide any audience information that was available. Challenges remote TCs faced included lack of social interaction, inability to stop working, and a lack of information and resources. The skills and

**Table 1. Demographics of Study Participants**

Pseudonym	Current industry/firm	Years prior to going remote	Length of time as remote worker
Delores	Financial services	16	10
Rose	Financial services	14	10
Laura	Professional services	8	10
Sue	Safety certification	8	7
Jenny	Financial services	5	7
Linda	Financial services	12	4
Debbie	Management consulting	3	3

Table 2. Sample Coding

Question	Responses	Code/themes
Survey 1, #5: What are the challenges of being a remote worker?	In an office environment people tend to know what is going on in the lives of their co-workers. This builds camaraderie and trust. This can happen with remote relationships, but it takes more time. It's difficult to make new friends.	Connection
	Staying connected to others with whom you work, staying informed. Casual conversations happen in the office that you're not privy to ... You become very tethered to your desk.	Connection Consideration Delineation
	Separation of work/home. Esttablishing a boundary between work-time/off-time is difficult. This includes a physical separation (home office, personal space). The flexibility makes you feel like you should or could ALWAYS be working.	Delineation

strategies used to cope with challenges were varied, but the most frequently discussed strategies included communication, self-discipline/motivation, and organization/structure.

### Lack of Audience Contact

Despite our field's understanding that involving representative audience members is an important part of the writing process, the participants in this study rarely obtained any information directly from their audiences. On the first survey, I asked the participants: *"How often (if ever) and in what capacity do you interact with members of your target audience or end users? Your target audience or end users are those who will take the courses you design, develop, or manage."*

With only two exceptions, the comments of these TCs indicated that they *never* interacted with members of their target audience. Representative comments included the following:

Debbie: "I am never involved in the needs assessment."

Ann: "...the heads of the learning department tell me what we are going to teach them."

To determine if my participants found this lack of interaction detrimental to their work, I asked follow-up questions (regarding audience interaction) during my phone interviews. Just two of the participants noted that their lack of interaction with the end-users was problematic:

Delores: "I find it very motivating if I can [interact with] some audience members. It makes it more real for me. I don't know that it impacts the quality of my work, but it impacts my motivation."

Jenny: "I have strong feelings about [not interacting with the end-user]. It's not the best way to work; I don't see the whole picture. The result is that I might be designing based on incorrect information."

Clearly, these two TCs considered interactions with representative audience members beneficial and noted that the lack of such interaction was detrimental in the quality of their work. However, the five remaining participants indicated that non-contact with representative audience members was simply the way their clients did business (*"these decisions are based on time and budget"*) or that the clients performed the needs assessment themselves or that needs assessments were not, in their opinion, necessary for their particular projects. Additionally, when I asked about challenges of being a remote writer, no participants mentioned lack of contact with audience as a challenge to accomplishing their work.

Guessing that their ability to interact directly with their audience would be limited, I asked a second question of the participants: *"Do you ever envision a particular or composite trainee or type of learner when you are writing? If so, please explain."* Supporting what Blakeslee (2010) found in an earlier study, two participants in my study indicated that they visualized a particular "persona," as they wrote. The personas, however, were general, rather than specific in nature. These participants responded as follows:

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Debbie: “I picture a new hire as young and wanting to have fun.”

Delores: “I picture them...as very bright.”

Interestingly, there was no additional indication that the participants invoked their audience except that two of them said they envisioned the readers as themselves. These responses were:

Rose: “I put [myself] in their shoes – would I want to do this or sit through this [?]”

Laura: “[You] put yourself in their shoes.”

I found these particular responses somewhat problematic. Based on our discussion it seemed like “putting yourself in someone else’s shoes” was actually putting them (the audience) in theirs (the TCs), which brings to mind a point Russell Long (1980) made 30 years ago, when he noted that it is easy for TCs who are not considering their audiences to slip into the habit of writing for one’s self. Ede and Lunsford (2009) state that changes in technology have “opened avenues for audience to take on agency and to become participants and creators/shapers of discourse in more profound ways than ever before” (p. 60). In some ways, though, the very technology that makes the work of the remote TC possible is also the technology that remote TCs must work around to come into contact with their audiences. This further emphasizes Blakeslee’s (2010) call to “reexamine the notion of audience to determine if anything is changing or needs to change in response to the field’s shift to digital communication” (p. 200).

### Challenges of Working with Remote Project Teams

This study was also concerned with the particular challenges remote writers faced compared to their on-site counterparts. My study confirmed some of the findings of previous research, specifically, that remote TCs are challenged by lack of cooperation (Brizee, 2008); collaboration (Brizee, 2008; Fisher & Bennion, 2005; Rainey, Turner, & Dayton, 2005); and communication (Robey, Khoo, & Powers, 2000; Smart & Barnum, 2000). In the surveys or interviews, I did not provide pre-established categories or codes to my participants; instead, I asked the following open-ended question: *What are the challenges to being a remote worker?*

Using inductive coding that I developed by directly examining the data, I categorized comments pertaining to these challenges under the themes of connection or consideration. Examples of how the responses were categorized will be explained later in this section.

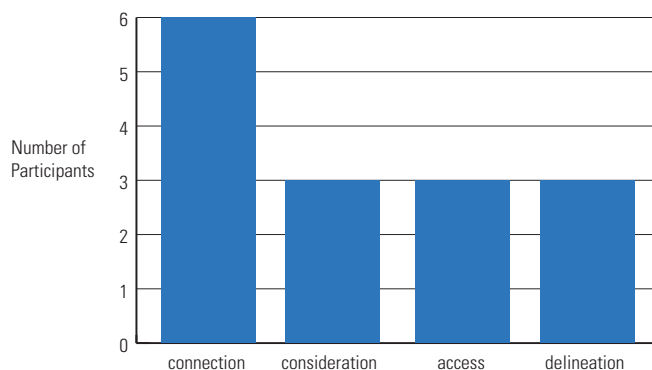
Unlike participants in previous studies, my participants did not cite the complexity of the work or technology as a particular challenge. However, my study did find two additional challenges: access to information and resources and being able to delineate work time from free time.

I grouped and coded the challenges articulated by the participants into the following categories:

- Connection
- Consideration
- Access
- Delineation

The number of participants who cited each type of challenge is shown in Figure 1. Communication and collaboration were not specifically reported as challenges in my study. However, several responses in the connection category, such as lack of connectedness with team and inability to create social networks, could be classified as communication issues. In addition, although collaboration was not specifically mentioned, consideration (such as not being invited to ad-hoc meetings) suggests collaborative behaviors.

Connection was the top concern of the participants of this study. Eight comments mentioned that working remotely results in a lack of social interaction, engagement, and networking. From the first survey and the follow-up phone calls, I received the following relevant comments:



**Figure 1. Challenges Facing Remote Technical Communicators**

- “It can get lonely.”
- “I don’t hear jokes anymore.”
- “[It’s difficult] staying connected to others with whom you work.”
- “Networking falls to the wayside.”
- “[I feel] less engaged working virtually.”
- “It’s not human interaction; it’s virtual interaction.”

These types of challenges often led to a difficulty in building new relationships. One participant said it best:

In an office environment, people tend to know what is going on in the lives of their co-workers. This builds camaraderie and trust. This can happen with remote relationships, but it takes much more time. (Delores)

Delores was a consultant who had worked for over 15 years as an on-site TC before becoming a remote TC, and her last on-site position was director in a large consulting firm. While she was a participant in the study, Delores reported working 95% of the time out her home office, 1% in public spaces (like coffee shops), and 4% at the client site. Since Delores did not share an office, her face-to-face time with colleagues was limited to less than 5% of her work time, quite a departure from working in an office environment.

Participants in my study mentioned that a challenge to working remotely was not being in a position to have spontaneous meetings or brainstorming sessions that arise when colleagues work together on-site. Because they were not physically present, consideration was not given to any input they might have had. Following are the three responses I received regarding this lack of consideration.

- “[I’m] not privy to casual conversation.”
- “Without a physical presence, [I] might not be invited to a spur of the moment meeting or receive follow up e-mail.”
- “[Being remote] precludes impromptu brainstorming or consultation.”

Access to information or resources was limited for some participants in this study. They cited such difficulties as being overlooked on distribution lists and having a hard time obtaining the “collective knowledge” that arises from groups. Only one

reference was made to lack of resources, and no further explanation was given.

A final challenge for remote TCs as uncovered by this study is that of leaving the work and achieving work-life balance. Participants specifically mentioned the inability to delineate “work” time from “personal” time. These respondents noted the following:

- “The work is always there. There is no getting away from it.”
- “Maintaining balance [is difficult].”
- “The flexibility makes you feel like you should or could always be working.”
- “You become very tethered to your desk.”

These findings support and give voice to Larbi and Springfield’s (2004) assertion that remote TCs face challenges of working outside the office. In their words, “In the haste to abandon the geography of office walls, many assumed that electronic relationships would be as meaningful as—or even richer than—the ones physically next door” (p. 102). What this study shows is such electronic relationships require specific skill sets for the remote TC to be successful.

### Skills for the Successful Remote TC

My participants named several skills necessary for the success of the remote writer. The majority of the comments fell into one of the following categories:

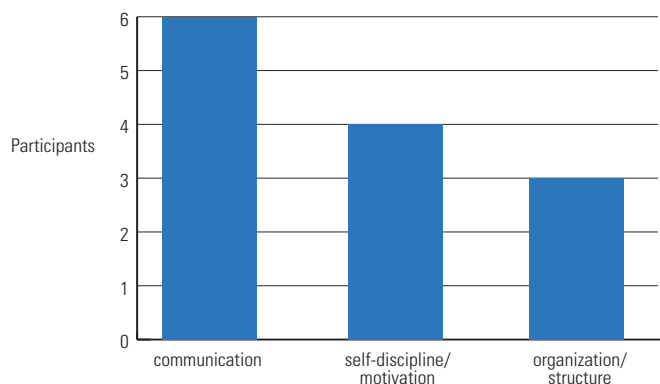
- Communication
- Self-discipline/motivation
- Organized/structure

The number of comments falling into each category is displayed in Figure 2. My findings supported previous research findings that communication such as face-to-face time, soft skills, and previous communication with a particular group is a key success factor for the remote TC. Technology was not found to be a major success factor in my study. In addition to the previously identified success factors, my study found that being motivated, taking initiative, being organized, and being structured are also key to the success of the remote TC.

In addition to the most frequently noted categories, various study participants mentioned each of the following factors one time as a skill that would help the remote instructional designer to be successful:



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**Figure 2. Success Factors of Remote Technical Communicators**

- Solving problems
- Identifying stakeholders
- Meeting deadlines
- Following-up
- Having the appropriate skill level

However, I did not chart these responses because each was mentioned only once and all could also be attributed to the local (non-remote) TC. While this list is by no means exhaustive, it provides us with a good preliminary idea of what a small group of TCs see as important skills. Future studies could look to expand this list and gain more detail around these topics categories.

Barker and Poe (2002) describe how today's business model requires a different type of workforce – one where TCs must be self-managing, self-educating, and flexible. My study responses validated these findings. The predominance of statements made about communication confirms the importance of communication written in earlier literature. What is new is how my participants conceived of and defined communication skills. They articulated these skills on a more granular level than I have previously seen. According to these participants, communication included such activities as speaking, listening, and interpreting information. As one participant wrote:

Because communication is greatly impaired by the lack of body language and facial expression, the ability to communicate in spite of these constraints is extremely important. That means not only being careful in speaking and writing but [in] interpreting information as well. (Delores)

A sub-theme that emerged from the category of communication was the importance of building a relationship with one's team members. Effectively, the remote TCs needed to find ways to build credibility and trust with people they may have never met and had only interacted with electronically. My study participants employed the following tactics to build credibility: first, they would make opportunities to discuss their experience. For instance, they might state that their background includes years of developing storyboards in Lectora.

I was new on the project and got the feeling that some group members thought that meant I was a “new” designer. I'm sure my [youthful sounding] voice didn't help. I immediately started using buzz words and casually dropped that I had been developing in Lectora for three years and before that I had used PowerPoint to create storyboards. (Debbie)

Another way they built credibility was to mention similar projects on which they have worked. For example, if they had been hired to conduct a needs assessment, they might find the opportunity to mention that they had conducted large-scale needs assessments that are similar to the project at hand. And one of the primary ways these instructional designers compensated for lack of informal type of conversation that occurs in break rooms or hallways was to create opportunities for informal discussion. For instance, they would dial into a conference call two-three minutes early so that they were one of the first ones on the call. They would then make small talk with others who dialed in early and before the official call began. This small talk allowed the remote TCs to build a type of camaraderie with their other team members. It didn't necessarily matter *what* they talked about as much as it mattered that they did talk.

Another aspect of communication uncovered in my research dealt with the various media TCs used to work with team members and to conduct meetings. As anticipated, face-to-face meetings were the exception rather than the rule with the remote instructional designers in this study. As one participant explained, “*Currently, the vast majority of my work is accomplished without meeting my project manager [in person] or Subject Matter Experts...*” Instead of meeting in person, they communicated with their project teams using the following technology:

- Telephone
- E-mail
- Instant messaging
- NetMeeting and LiveMeeting types of software

A couple participants mentioned specific situations where they use one medium over another, but in general, conversations with entire project teams were less frequent and occurred via conference calls or software such as LiveMeeting or NetMeeting, and conversations between two group members were more frequently handled by instant messaging or direct phone calls. While it was not the primary intent of this study, the interviews and questionnaires led to some best practices for when and how often to use which medium. Refer to Table 3 for these best practices.

This study found that while project work can be done independently and offsite, there are specific times when a face-to-face meeting trumps a conference call or use of other distance medium. Larbi and Springfield (2004) noted in their research that their remote project was successful because they had an initial face-to-face meeting to set up ground rules (p. 104). My study confirmed this finding. One participant in my study articulated this as follows:

[Projects take] longer because you have shorter amounts of time with the content specialists. Ideally, you would have a half day in person to kick off project and nail down the major design and then

have people flush out the details of their individual sections; In-person kick-off meetings are preferred - when these types of meetings are done over the phone, things are dragged out. You piece-meal it together incrementally. (Linda)

Self-discipline and motivation was another frequently cited category of success factors for remote TCs. It seems that lack of social interaction led to other types of challenges, sometimes even involving the devolution of personal hygiene. One participant summed it up when she wrote the following:

It takes practice to be successful at working remotely. You have to identify the necessary habits and what works best for you. It is not as easy as it looks and everyone who does it is not good at it. Now that I work at home I have met several people who worked remotely previously and [went] back to working at their traditional jobs in a company... I heard several examples of people not maintaining structure, not showering, or getting out of sweats for days etc. (Jenny)

The final category of frequently cited success factors for remote TCs was organization and structure. Organization was cited several times, but no further explanation was given (perhaps none was needed). In addition to the structure mentioned in the previous quote, one participant defined it as the "ability to maintain a self-imposed schedule."

**Table 3. Communication Media**

Medium	Best used for ...
<b>Conference calls</b>	Collaborating with team Updating more than two team members
<b>NetMeeting/LiveMeeting (software application)</b>	Sharing and/or communally updating documents Demonstrating procedures
<b>Instant messages</b>	Engaging in frequent, brief conversations Having informal conversations Checking if someone is available for a phone call
<b>Face-to-face</b>	Conducting project kick-off meetings On-boarding large teams Conducting design meetings (particularly "lock-down" meetings where the subject-matter experts are scheduled to work for one or more days with the TC) Meeting near the project implementation date
<b>All</b>	More interaction is necessary as team approaches the project deadline

## Remote Technical Communicators

### Discussion

While on-site TCs may also be afforded little to no direct contact with their audiences, the barriers presented to remote TCs are more pronounced. This is sometimes attributed to the remote TC having multiple (sometimes unknown) intermediaries or gatekeepers between them and their audiences. It can also be the result of remote TCs having fewer opportunities to circumvent organizational processes that discount the importance of TC contact with audience members. As Blakeslee (2010) notes, it is a misconception that digital audiences are somehow less important or more generic or simpler to address. They are complex and deserve “analysis and accommodation that embrace and take full account of this complexity” (p. 223). As it turned out, none of the information my participants obtained about their audience members came directly from representatives of that audience. Rather this information was relayed via another project team member. My participants were reliant on their team members to get information about the audience or end-user. As Blakeslee explained, when interacting with readers is not possible, TCs should seek to obtain as much information as they can from whatever sources they have available to them. In the case of my participants, it was the project teams that were available. Regular communication between the TC and her project team took place virtually. If there was any contact with representative end users, it was done by one of the internal members of the staff, often the SME. This implies that the information the remote TCs have on the audience may be less reliable since it was not obtained first-hand.

Despite our field’s understanding that involving representative audience members is an important part of the writing process, the participants in this study did not obtain any information directly from their audiences. Did this ultimately hurt the quality of the documentation? Future studies might look to somehow measure and compare the quality, effectiveness, reception, or use of documentation created by remote TCs with direct input of users against documentation created without this input. If the input is found to influence the quality, effectiveness, reception, or use of the documentation, as I suspect it will, we should explore creative ways to include the audience in this process or to have some influence over the questions the

other team members take to the audience regarding their needs and preferences.

Our field would benefit from continuing this research and by examining particular problems that can emerge with remote TCs working with teams that are physically separated and writing for remote audiences, when these TCs often have at their disposal only virtual/digital types of communication. Communication was a major theme that arose when examining the data both on the challenges and the success factors of the remote TCs. The responses offered by these participants suggest there were inventive but specific ways of understanding and acting within a group. The participants identified the importance of communicating their credibility by sharing their experience, expertise and skill set using whatever distance media at their disposal, particularly phone conversations. While their discourse seemed to be, in many ways, creative and innovative, it still used approved channels. For example, sending formal letters of introduction or copies of resumes were not accepted genres or channels by which to communicate one’s background and experience. Ad-hoc telephone conversations were the typical genre these discourse communities used. Smart and Barnum (2000) state “Many teams fail--and that failure is often due to poor or inadequate communication” (19). Communication is a complex topic that would benefit from being broken down and examined from several angles. Future studies of remote writers might attempt to unpack the subtleties that comprise communication and examine this topic in a more granular way.

Several of the challenges cited by my participants are not unique to TCs. For instance, topics such as the isolation and lack of structure experienced by remote workers have been identified in articles on virtual team management. Practitioners and scholars in the field of business management (Alexander, 2012; Evans, 2010; Grosse, 2002; Maher, 2014; Pauleen, 2003; Pauleen and Yoong, 2001; and others) have offered advice for managers dealing with challenges and building positive relationships on remote teams. The primary difference between the challenges faced by remote workers in general and those faced by remote TCs has to do with the already ambiguous nature of the role of the TC and the fact that industry does not always recognize and promote the full range of skills TCs bring to the workplace. Brady and Schreiber (2013) suggest that TCs are challenged because to succeed in corporate

environments, they must continuously explain their value to co-workers and bosses and must also begin to represent themselves and their work as dynamic. Subsequently, remote TCs have to build not only their personal ethos, but also have to also promote the value of their role.

As this was an exploratory pilot study, the number of participants (n=7) interviewed was limited. Having a larger group of participants would potentially uncover additional challenges related to the challenges of remote TCs accessing audiences and working on project teams. Future research could further test the results and conclusions of this study using a larger group of participants. In addition, this study focused solely on the challenges of being a remote TC. To advance a more comprehensive understanding of the remote TC experience, future studies should also examine and analyze the advantages that accompany being a remote TC.

### Implications for Technical Communication Practice

Context plays an important role in technical communication. This study provides a contemporary illustration of what the earlier scholars have said about the importance of attention to the social and contextual components of the audiences. Today, we need to also consider the social and contextual position of the TC, as we cannot take for granted that they will always be part of an onsite, established corporate environment. What they *will* be part of are virtual communities of practice, and in this role, as one study (Robey et al., 2000) showed, their learning will be based on actual work practices rather than on knowledge acquired outside the context of actual work.

In today's digital and dispersed workplace, TCs will also have to work to acquaint themselves with potential challenges of working on a remote team and to create a toolbox of skills with which to meet those challenges. These skills are of extreme importance when it comes to the success of TCs to effectively define, understand, and write for industry audiences, as well as successfully overcome challenges using strategies often particular to *digital project groups* and *distance collaboration*.

There are some key lessons we can learn from the participants in this study on remote TCs, and organizations will benefit from considering the following when working with new TCs, whether they are internal or external to the organization:

- Instill the importance of partnering with team members, especially SMEs and project managers, as they are often those with direct access to the end user audience.
- Explain that each corporate culture and work team will have its own (usually unstated) rubric that determines which communication technology to use and in which situations. Encourage TCs to discern this rubric early on by asking team members which type of communication medium they prefer the TC to use and when (and how often).
- Advise TCs that building new, trusting, relationships and maintaining contacts may not be easy, and they should expect to be creative in building and maintaining these relationships. One method is to call into a conference call early to take advantage of small talk. Another is to form relationships via professional social networking sites such as Linked In, where the TC can learn more about team members and communicate congratulations on promotions and work anniversaries.
- Warn TCs that when they work remotely, they may experience feelings of loneliness or isolation, and they will need to develop strategies to cope with these feelings. These strategies may include becoming involved in local, professional organizations and maintaining schedules that include regular meetings with friends or former colleagues.
- Explain to remote TCs that not having a physical presence in an office will make it difficult for them to engage in small talk or even to participate in critical conversations. Encourage them to find alternate ways to stay connected to the people and projects in their organization. Again, this could include connecting to others on professional social networking sites such as Linked In, and if geography is not prohibitive, arranging for informal monthly or quarterly lunches or other opportunities for face-to-face socializing.

Today's TCs will be entering a workforce where they will be writing in multiple new formats including websites, blogs, and social networking media, and in many cases, they may also be working remotely and/or as part of a global team. Instructors and employers of these TCs might continue to search for or create models that will help TCs not only grapple with the concept of remote writing, but will also help them identify and address challenges inherent in their remote work.



## Remote Technical Communicators

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### About the Author

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## Remote Technical Communicators

### Appendix 1: Remote Instructional Designers - Survey 1 Questions

Name:

E-mail:

Date:

Instructions: Please complete this survey and return it to Tammy Rice-Bailey at ricebai2@uwm.edu. Thank you for your participation.

1. What is your current role? Select all that apply.

Instructional Designer

Project Manager

Coach

Other: \_\_\_\_\_

2. If you selected more than one role in the previous question, please indicate approximately what percentage of your time is spent in each role.

Instructional Designer %

Project Manager %

Coach %

Other: %

3. Select all the places from which you perform your work and the approximate percentage of time you work from each

Home office %

Public location (ex. coffee shop) %

Client Site %

Other: %

4. Approximately how long have you been a remote worker?

5. What are the challenges to being a remote worker?

6. With how many different project teams are you currently working?

1

2

3-4

More than 4

7. If you are an instructional designer, from whom do you typically take direction on a project?

8. How often (if ever) do you interact with members of your target audience or end user and in what capacity?

9. If you are an instructional designer, what resources do you use when you have questions about or problems on a particular project?

10. Have you ever worked with a group remotely and then, after some time, actually met members of that group in person?

Yes

No

11. If you answered yes to the previous question, in what ways were various team members different than how you envisioned them?

12. If you answered yes to the previous question, in what ways were various team members the same as you envisioned them?

13. What skills make a successful remote instructional designer?

*Thank you for sharing your time and experience.  
I look forward to chatting with you soon!*

**Appendix 2: Remote Instructional Designers - Survey 2 Questions**

Name:

E-mail:

Date:

Instructions: Please complete this survey and return it to Tammy Rice-Bailey by Monday, November 7th at ricebai2@uwm.edu. Thank you for your participation!

1. With whom do you share general questions, concerns, or ideas about instructional design or project management work? No need to mention specific names.

2. To whom do you “vent” (complain or commiserate) about instructional design or project management issues? No need to mention specific names.

3. Are there ways to compensate for informal (“water-cooler”) conversation? If so, what are they? If not, why?

4. Comparing the professional network you had when you were working as an on-site employee to your professional network as a remote writer, which of the following is true for you?

My professional network has decreased

My professional network has remained about the same

My professional network has increased

5. What are your thoughts about social networking (Facebook, Twitter, Linked-In, etc.)?

It’s nice for others, but it doesn’t interest me

I use it occasionally

It’s crucial to me

6. Do you ever envision a particular or composite trainee or type of learner when you are writing? If so, please explain.

*Thank you for your time and participation!*



# Developing and Testing a Video Tutorial for Software Training

Hans van der Meij

## Abstract

**Purpose:** Video tutorials for software training are rapidly becoming popular. A set of dedicated guidelines for the construction of such tutorials was recently advanced in Technical Communication (Van der Meij & Van der Meij, 2013). The present study set out to assess the cognitive and motivational effects of a video tutorial based on these guidelines.

**Method:** Participants were 65 students (mean age 12.0 years) from elementary school. The procedure was as follows. First, students completed a pre-test. Next, they viewed videos and completed practice tasks. Finally, students completed a post-test and retention-test.

**Results:** The pre-test revealed low scores on task relevance, and low initial task performance. During training, students reported positive mood states, high flow, and significantly higher task relevance than in pre-testing. Task performance rose significantly during training, and was also substantially higher on the post-test and retention-test than in pre-testing. Only cognitive factors significantly predicted task performance.

**Conclusion:** The effectiveness of the video tutorial attests to the quality of the design guidelines on which it was based. The critical contribution of specific guidelines are a potential area for further research.

**Keywords:** video instructions; job-aid; learning; motivation; cognition; tutorial

## Practitioner's Takeaway

- This study assessed the cognitive and motivational effects of a video tutorial for software training based on the set of design guidelines from Van der Meij and Van der Meij (2013).
- The tutorial significantly increased user motivation.
- Task performance with video access (serving as job aid) was excellent (86% correct).
- Task performance without video access (learning) was satisfactory (68% correct immediately after training; 66% correct one week later).
- Only cognitive factors accounted for task performance.

## Introduction

With the video tutorial quickly becoming a prevalent format for software training, it is important to understand how people process videos and how the design of a video tutorial can best accommodate these processes.

Fundamental insights about video processing can be gleaned from Mayer's (2005a) Cognitive Theory of Multimedia (CTM). This model includes four assumptions about multimedia information processing. One, there are different sensory channels that are relatively independent of one another. For video productions that often feature a combination of words and pictures, the processing mainly involves the user's oral and visual channels. Two, working memory is limited in capacity and duration. Only a few pieces of information can be attended to at any one time. In contrast, long-term memory has virtually unlimited capacity. Three, learning can be enhanced with dual coding. Presenting information in both words and pictures can strengthen its impact in each modality and facilitate comprehension. Four, the user should actively process the information. The user should engage in processes such as information selection, organization and integration with existing knowledge to achieve meaningful learning.

CTM has been criticized for its lack of attention to individual differences, metacognition, and motivation. A popular model that has extended CTM with these factors is Moreno's (2006, 2009) Cognitive-Affective Theory of Learning with Media (CATLM). In CATLM, Moreno argues that individual differences such as prior knowledge and cognitive style can affect how people process and what they learn from multimedia. CATLM further includes the idea that learning is mediated by metacognition. Metacognition refers to an awareness and analysis of a person's own learning or thinking. Metacognitive processes such as planning and monitoring are assumed to play a regulatory role in learning (compare Hagemans, Van der Meij, & De Jong, 2013). Finally, an assumption in CATLM is that initial motivation and motivational mediators influence learning. Pertinent initial motivational constructs are perceptions of task relevance and self-efficacy beliefs (Eccles & Wigfield, 2002; Pintrich & Schunk, 2002). Important motivational mediators are mood states and flow (Vollmeyer & Rheinberg, 2006).

The insights from CTM and CATLM have formed the foundation for a large set of abstract principles for the construction of multimedia. For instance, CTM has led to the multimedia principle, which holds that words and pictures are more conducive to learning than words or pictures alone. Similarly, CATLM has given rise to the personalization principle, according to which people learn better when a message is delivered in a conversational style where written or spoken explanations are given in the first or second person.

Agrawala, Li, and Berthouzoz (2011) have argued that practitioners sometimes need more concrete principles to guide their designs. In addition, they indicate that the domain and intended outcome may require a specific instantiation of a principle or perhaps even the introduction of a new one. In reaction to this 'call,' Van der Meij and Van der Meij (2013) recently summarized the literature and proposed a set of eight guidelines for the construction of a video tutorial for software training. Like CTM and CATLM, these guidelines address both cognitive and motivational design issues. In addition, the guidelines incorporate domain-specific insights on software training, and are assumed to be concrete enough for practitioners to follow.

The present study examines the effectiveness of a video tutorial that was designed according to these guidelines. It measures user cognition and motivation before, during, and after training (compare Leutner, 2004; Park, Plass, & Brinken, 2014). More specifically, it reports on the changes in the absolute level of the user's task performance and motivation (that is, task relevance, self-efficacy, mood states, and flow). In addition, the study explores the relationships among the various cognitive and motivational measures. Before discussing the empirical study, we briefly describe the eight guidelines.

## Guidelines for the Construction of a Video Tutorial for Software Training

The primary function of many instructional videos on software programs is to enable task performance. Such videos serve solely as a job aid; they should assist the user in achieving a software task. In general, this means that the video gives instructions for completing regular tasks. Occasionally, there may be instructions for problem-solving, akin to the FAQ section on a Web site.

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The construction of a video *tutorial* presents an additional challenge. Not only must the video facilitate task performance, it should also support task learning. The user should really get to know how to accomplish the trained tasks in order for that person to be able to handle a broad range of related software tasks (compare, Brunyé, Taylor, Rapp, & Spiro, 2006). In other words, for a video tutorial being a job aid is necessary, but not sufficient. The video also needs to enhance learning.

The guidelines proposed by Van der Meij and Van der Meij (2013) address both serving as a job aid and enhancing learning. In short, they should support designers in constructing a video tutorial. Figure 1 summarizes the guidelines. The authors talk over their theoretical and empirical foundations in considerable detail in their paper. The discussion below concentrates on the domain-specific character of the guidelines.

*Guideline 1: Provide easy access*

*Guideline 2: Use animation with narration*

*Guideline 3: Enable functional interactivity*

*Guideline 4: Preview the task*

*Guideline 5: Provide procedural rather than conceptual information*

*Guideline 6: Make tasks clear and simple*

*Guideline 7: Keep videos short*

*Guideline 8: Strengthen demonstration with practice*

**Figure 1. Eight Guidelines for the Design of a Video Tutorial for Software Training** (Source: Van der Meij and Van der Meij, 2013)

**Guideline 1: Provide easy access.** The first criterion for video tutorials to satisfy is that they should be accessible (Novick & Ward, 2006; Roshier, Foster, & Jones, 2011). Facilities such as YouTube enable user access through indexed keyword searches. After a video is selected, the Web site also presents an array of related videos that may be of interest to the user. Software companies that offer instructional video for their products sometimes do likewise (for example, Microsoft), but they may also present a table of contents as the main port of entry (for example, TechSmith). The titles in such a table of contents should succinctly describe the task that is demonstrated and should be understandable by the novice to increase accessibility (see Farkas, 1999; Van der Meij & Gellevij, 2004).

**Guideline 2: Use animation with narration.** This guideline resonates with the multimedia principle (Mayer, 2005a). It also fits with the modality principle,

according to which learning is enhanced when words are presented as narration rather than as on-screen text (Mayer, 2001, 2005b). For a video tutorial for software training, the specific recommendation is to use a recorded demonstration (Plaisant & Shneiderman, 2005).

**Guideline 3: Enable functional interactivity.** The ongoing stream of information in a video constantly challenges the user to decide which information to encode, process and store (Lang, 2000). Because this can be very taxing, special attention must be paid to the communicative properties of the video, and the affordances for user control (compare Moreno, 2006). The designer can contribute to functional interactivity by carefully considering the system-based pacing of the video. The important obstacle of the fleetingness of video and the risk of lack of perception and comprehension that comes with it can also be partly overcome with user control of the playing of the video. This type of affordance is also an important means for enhancing user motivation (Keller, 2010).

**Guideline 4: Preview the task.** It is not uncommon for video instructions to be preceded by a preview in the form of a tour of the main screen components (Plaisant & Shneiderman, 2005). The preview should introduce the critical vocabulary for concepts and objects, and orient the user to the main goal of the task. Research on event cognition offers support for this guideline (Zacks & Tversky, 2003). An important sub-goal of the preview is motivational. The preview should tell the user what a procedure can achieve. Promoting the goal can contribute to the perception of task relevance and hence the user's willingness for task engagement (Farkas, 1999).

**Guideline 5: Provide procedural rather than conceptual information.** The foremost reason why people turn to a video tutorial for software training is that they want to know how to accomplish software tasks. The core issue is therefore to create video that is task- and action-oriented (Carroll, 1990; Van der Meij & Carroll, 1998). Plaisant and Shneiderman (2005) likewise indicate that video should concentrate on conveying procedural information. In the paper we will henceforth refer to instructions about task execution as 'procedures.'

When a procedure must be *learned*, in addition to carrying out the actions, the user should be stimulated to reflect (Van der Meij, Karreman, & Steehouder, 2009). A design feature that is sometimes used in video to achieve such reflection is the inclusion of a deliberate pause of 2

to 5 seconds immediately after task completion. Ertelt's research (2007) showed that such built-in reflection moments increase learning from video.

**Guideline 6: Make tasks clear and simple.** This guideline reflects the apprehension principle from Tversky, Bauer-Morrison, and Betrancourt (2002), which states that animations should be readily and accurately perceived and comprehended. Minimalism suggests that software tutorials should present only the most basic or insightful method to the user (Van der Meij & Carroll, 1998). An additional requirement is that each task or sub-task should require no more than three to five actions to complete (Doumont, 2002; Spanjers, Van Gog, & Van Merriënboer, 2010; Van der Meij & Gellevij, 2004; Zacks, Speer, Swallow, Braver, & Reynolds, 2007). Furthermore, the instructions should follow the user's mental plan in describing an action sequence. The actions and corresponding narrative should follow the path that the user's thoughts and actions take during task execution (see Dixon, 1982; Farkas, 1999; Zacks & Tversky, 2003).

**Guideline 7: Keep videos short.** Plaisant and Shneiderman (2005) recommend a video length of 15 to 60 seconds for keeping the user engaged and minimizing what needs to be remembered together. For tasks that are too long to display in a single demonstration, meaningful segmentation presents an important design challenge (see Spanjers et al., 2010; Zacks et al., 2007).

**Guideline 8: Strengthen demonstration with practice.** The coupling of instruction and practice that is commonly used in education is recommended for software training as well (see Rieber, 1991). Practice serves to consolidate and enhance learning. Ertelt's (2007) study found that the opportunity for practice after video instructions significantly improved user performance compared to a non-practice control condition.

## Experimental Design and Research Questions

The empirical study measures student cognition and motivation before, during, and after training with a video tutorial on Word's formatting options. Task performance is the measure of student cognition. There are four measures to gauge student motivation (that is, task relevance, self-efficacy, mood states and flow). The specific research questions are stated below.

### Question 1: Is motivation affected by the video tutorial, and what predicts any changes?

According to expectancy-value theory (Eccles & Wigfield, 2002), task relevance and self-efficacy are important motivational constructs. Task relevance refers to the perceived present and future utility of an activity. It indicates the importance of a task to a person's goals or concerns (Van der Meij, 2007). A higher perception of task relevance stimulates someone to invest more effort. In other words, when a video tutorial enhances task relevance, there is a greater chance that it will motivate users to try out certain tasks. Self-efficacy refers to a person's expectancy for success in challenging tasks (Bandura, 1997). When self-efficacy is enhanced, people are more likely to attempt new tasks and to persist when obstacles occur. For initial motivation, the study assesses task relevance and self-efficacy.

According to the cognitive-motivational model of Vollmeyer and Rheinberg (2006), mood state is an important mediator for the influence of initial motivation on task performance. A mood state indicates the feelings that students experience during training. In this study, we measure the valence (that is, positive, neutral, negative) of these mood states (compare Plass, Heidig, Hayward, Homer, & Um, 2014). We examine whether mood state is a motivational mediator separate from initial motivation by looking at its unique contribution to task performance.

Research from Vollmeyer and Rheinberg (1999, 2006) further indicates that flow mediates the role of initial self-efficacy in task performance. Flow is a sign of concentrated effort. When a person is in a state of flow there is a good balance between that person's capacities and the task demands (Csikszentmihalyi, 1991). We examine whether flow is a motivational mediator separate from initial self-efficacy by looking at its unique contribution to task performance.

### Question 2: Is cognition affected by the video tutorial, and what predicts any changes?

Task performance is the measure of cognition. Pre-testing assesses how well the students can already perform the formatting tasks in the video tutorial. The pre-test gives baseline performance. During training, task performance on the practice tasks is measured. Because students have access to the video during training, this outcome signals the quality of the tutorial as a job aid. After training, a post-test and



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a retention-test assess whether students can complete the formatting tasks on their own. Thus, these tests assess learning. As with motivation, the study explores the relationships among the various motivational and cognitive measures to discover which factors predict task performance.

### Method

#### Participants

The participants consisted of 23 male and 42 female students from fifth and sixth grade (mean age 12 years, range 10.6 - 13.0). The students were from three classrooms from three elementary schools in the Netherlands.

#### The Video Tutorial

As stated earlier, the construction of the video tutorial was based on the guidelines from Van der Meij and Van der Meij (2013). In the discussion of the design of the video tutorial below, these guidelines are simply referred to, or their application in the designed tutorial is briefly mentioned.

The video tutorial discusses several Word formatting tasks that are important for school reports. Earlier studies have indicated that students from this age group generally do not yet know the best method, if any, for accomplishing these tasks (Van der Meij, 2012, 2013). The tasks are organized into three 'chapters.' The first deals with adjusting the left and right margins for a whole document. The second concentrates on formatting paragraphs, citations and lists. The third chapter deals with automatically generating a table of contents. The tutorial includes instructions in the form of previews or procedures. The visual demonstrations (animations) in the videos are always accompanied by a spoken voice (guideline 2).

The *previews* (guideline 4) define the concept (for example, paragraph or citation), distinguish the key screen object(s) needed for task completion, and display the starting and ending (before-after) screens of a task. The latter feature is a motivational strategy known as the late-point-of attack sequence (Goodwin, 1991). It is included in the previews to raise the students' appraisals of task relevance. The average length of the previews is 1.15 minutes (range 1.00 – 1.33). The preview always precedes the corresponding procedure.

The *procedures* demonstrate an unfolding scenario of task completion. Procedures describe, and sometimes explain, all of the user actions and software reactions in accomplishing a formatting task. Each student action on an input device is described in the narrative. The visible result on the interface is also shown in the video. Highlighting is used to draw the students' attention to pertinent information on the screen (guideline 6). Only the most insightful method is taught. There are no discussions about alternative procedures for achieving the same task. Conceptual explanations are also virtually absent (guideline 5).

The narrative is spoken by a female voice who directs the student's attention to the effects of actions with standard phrases such as 'You now see ...' Occasionally, the video zooms in on screen sections, and screen objects or areas may be highlighted. The procedure ends by inviting the user to open a practice file and engage in hands-on practice (guideline 8). The average length of the procedures is 1.13 minutes (range 0.47 – 1.42). The length of both types of video (previews and procedures) thus approximates the recommended duration (guideline 7).

To facilitate access (guideline 1), the video tutorial is presented on a *Web site* where the screen is divided into two areas (see Figure 2). The left-hand area with the table of contents is permanently visible to facilitate access. Chapter titles refer to previews. These titles are displayed on a dark blue background with a special icon at the end to signal their status as for viewing only. Paragraph titles refer to procedures. They are presented on a lighter blue background and end with an icon that signals that viewing followed by doing.

After the student clicks on a title, its background color changes to orange (as displayed for section 2.2 in Figure 2) and the corresponding video appears on the right-hand side, along with a transparent control toolbar on the bottom. The student can set the video into motion by pressing the start icon. The student can also pause and resume, return to the starting point, and increase or decrease the sound level (guideline 3). A ruler shows how far the video track has progressed.

For pre-training, a *scaled-down version of the Web site* was created for students to explore Web site navigation, to acquaint them with the difference between a preview and a procedure, and to practice switching between video and practice tasks.

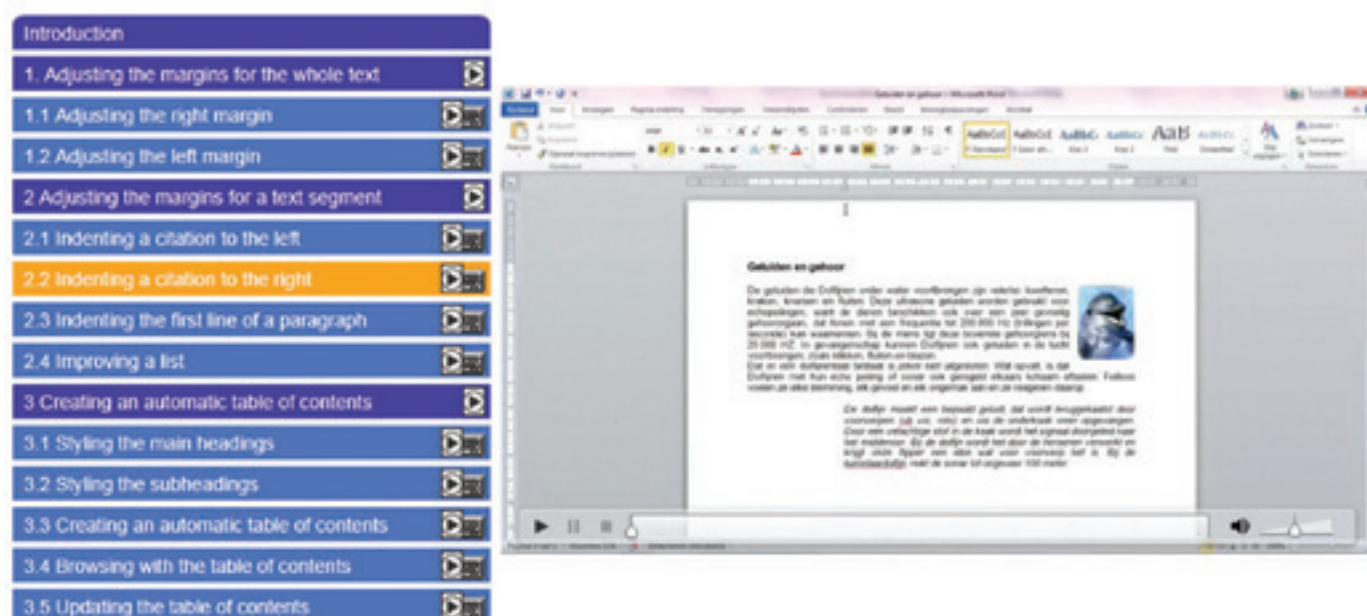


Figure 2. The Video Tutorial with a Clickable Table of Contents that Activates the Videos

### Instruments

An *Initial Experience and Motivation Questionnaire (IEMQ)* measured the students' initial motivation. For each training task, the student first received a Before-After screenshot plus explanation, and was then asked three questions: (a) 'Do you ever have to do this task?' (Experience), (b) 'How often do you need to complete this task?' (Task relevance), and (c) 'How well do you think you can complete this task?' (Self-efficacy). The student answered these questions by circling a number on a 7-point Likert scale where the end points were given as *never – always*, or *very poorly – very well*. Good reliability scores (Cronbach alpha) were found for Task relevance (0.85) and Self-efficacy (0.81).

A *pre-test* asked the student to demonstrate initial task performance. During this test the student was asked to modify the format of test files for the same tasks that would be trained. A score of 0 points was awarded for each task the student could not solve correctly. A good solution yielded a score of 1. The video tutorial presented 6 tasks to the students. Two tasks were each split into two sub-tasks in data analyses. Thus, the maximum pre-test score was 8, and scores were converted to a percentage of possible points.

An adapted version of Kolb's *Learning Style Inventory (LSI)* assessed the students' learning style (see Ten Hove, 2013). According to Kolb, people have different learning preferences (Kolb & Kolb,

2005). These can be represented in a two-dimensional figure in which the vertical line represents a 'grasping' mode (ranging from concrete experience to abstract conceptualization), and the horizontal line represents a 'transforming' mode (ranging from active experimentation to reflective observation). The adapted LSI consisted of twelve statements about learning with four possible answers. For instance, item 4 was formulated as 'I learn by ...' and the four answers were 'feeling,' 'doing,' 'watching,' and 'thinking.' These answers represented respectively concrete experience, active experimentation, reflective observation, and abstract conceptualization. Just as in the original LSI, when joined together the appraisals on these items classify a person as having a predominantly diverging, assimilating, converging or accommodating learning style. Unfortunately, the reliability outcomes for these styles were too low (all Cronbach alpha scores were below 0.60). Therefore, these data are not reported in this paper.

The *Mood States and Motivation Questionnaire (MSMQ)* was presented in a booklet that asked students to state their mood, their perception of task relevance, and their flow experience after task completion (for five tasks, so five times in total). Mood states were measured with a set of five pictograms plus descriptor, from which the student was asked to select the one that best fitted his or her current motivational state (Read,

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2008). Pictograms (a smiley) and text represented the following moods: happy, certain, neutral, uncertain and sad. The analyses of mood states concentrated on their valence (that is, positive, neutral or negative). Happy and certain were scored as signals of a positive mood; uncertain and sad were signals of a negative mood. Scores are given as a percentage. Thus, a score of, say 80% for positive mood state indicates that the student selected the happy or certain smiley at four of the five measurement points for mood states.

The MSMQ also presented five questions about task relevance (for example, 'I found this task interesting,' and 'This task seems useful'), and four questions on flow (for example, 'I had the feeling that I had everything under control,' and 'I was completely lost in thought'). The student answered these questions by circling a number on a seven-point Likert scale where the end points were given as *true* – *untrue*. All five measurement points yielded good reliability scores (Cronbach alpha) for relevance (range 0.85 – 0.95) and flow (range 0.84 – 0.96).

Students were prompted to practice the tasks for which they had received instructions (that is, whole text margins, paragraph indents, citation and list formatting, and automatic creation of a table of contents). For this hands-on experience they used *practice files*. In addition to facilitating task execution, these files standardized practice, making task completion efforts comparable across students. Task performance on the practice files was computed in the same way as for the pre-test.

A *post-test* and a *retention-test* asked the student to apply their recently acquired procedural knowledge in changing a single, poorly formatted Word file into a well-formatted exemplar. The tasks that the students were asked to perform with this file were similar to those discussed in the video. Scoring was identical with the pre-test.

### Procedure

The study was conducted in three sessions. In the first, students were told (5 minutes) that they would engage in software training on Word to assist them in improving the formatting of their school reports. Next, they were instructed to complete the IEMQ and pre-test (20 minutes). The students also completed the adapted LSI (10 minutes).

Training followed a day later. This session started with a ten-minute introduction for the whole class. Then

the students went to the computer room(s) where they were instructed to work independently for 50 minutes and to call for assistance only when stuck. Students received the audio input from the video via headphones. They could consult the video at any time. During training the MSMQ was administered five times, always after completion of a practice task.

After training was completed there was a five-minute break followed by the post-test, which the students had 20 minutes to complete. One week later the students took the retention-test (maximum 20 minutes). Students were not allowed to consult the video during testing.

### Analysis

Repeated measures ANOVAs were computed to determine whether significant changes in motivation or cognition had taken place. Multiple regression analyses (stepwise) were used to identify significant predictors for cognitive and motivational measures. Only statistically significant outcomes are reported in detail. Due to missing data, the degrees of freedom occasionally vary slightly. All tests were two-tailed with alpha set at 0.05. Cohen's (1988) *d*-statistic was used to report effect size. These tend to be qualified as small for  $d \approx 0.2$ , medium for  $d \approx 0.5$  and large for  $d \approx 0.8$ .

## Results

### Motivational outcomes and predictors

The IEMQ showed initial *self-efficacy* beliefs that were well above the scale mid-point of 3.5, indicating that the students started out with a fair degree of confidence in their capacities to complete the Word formatting tasks. In contrast, initial appraisals of *task relevance* were well below the scale mid-point. Students thus did not start out with considerable interest in the training tasks, supporting the design decision to address task relevance in the previews.

The mean score for *task relevance* during training was considerably above the scale midpoint (see Table 1). A repeated measures ANOVA revealed a statistically significant and substantial increase compared to the students' initial task relevance,  $F(1,64) = 124.12$ ,  $p < 0.001$ ,  $d = 1.65$ . For *flow* the mean score was considerably above the scale midpoint (see Table 1).

Table 2 shows the outcomes for the *mood states*. According to the data, students predominantly reported

**Table 1. Means (and Standard Deviations) for Motivation Before and During Training ( $n = 65$ )**

Before training		During training	
Self-efficacy*	Task relevance*	Flow*	Task relevance*
<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
4.84 (1.37)	3.17 (1.24)	5.47 (1.13)	5.18 (1.19)

\* Scale values range from 1 to 7; the scale midpoint is 3.5; a higher score indicates a higher appraisal

**Table 2. Means (and Standard Deviations) for Mood States During Training ( $n = 65$ )**

Positive mood		Neutral mood	Negative mood	
<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>	
66.4% (34.2)		27.9% (33.4)	5.8% (14.5)	
Happy	Certain	Neutral	Unhappy	Sad
<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
21.9% (30.9)	44.4% (34.1)	27.9% (33.4)	5.49% (14.0)	0.3% (2.5)

positive mood states during training. Negative moods rarely occurred.

There were statistically significant relationships between the motivational measures during training. Task relevance correlated positively and significantly with flow ( $r = 0.48$ ,  $p < 0.01$ ). Table 3 shows that there was considerable convergence between the three motivational measures during training. That is, high appraisals of task relevance went hand-in-hand with more frequent reports of positive moods, while a negative correlation was found for neutral mood states. Similarly, strong flow experiences correlated positively with more frequent reports of positive moods while negative correlations were found with neutral or negative mood states.

Regression analyses with initial motivation and cognition as *predictors for motivation* during training, yielded the following results. Task relevance before training accounted for a significant proportion of the variance in task relevance during training,  $R^2 =$

0.08,  $F(1,64) = 5.45$ ,  $p < 0.05$ . Flow was predicted by initial self-efficacy,  $R^2 = 0.08$ ,  $F(1,64) = 5.65$ ,  $p < 0.05$ , matching the prediction from Vollmeyer and Rheinberg's (2006) cognitive-motivational process model. In both cases the relationship was positive, meaning that higher appraisals of self-efficacy before training predicted higher appraisals of flow during training. Mood states were not predicted by any initial measure of motivation. Initial (pre-test) task performance also did not predict motivation during training.

### Cognitive outcomes and predictors

Table 4 shows that students started out with low initial task performance, indicating that there was an objective need for training. During training, the students achieved a very high level of task performance. On average, they successfully completed over eighty percent of the practice tasks. The difference with the pre-test was both statistically significant and substantial,  $F(1,62) = 397.78$ ,  $p < 0.001$ ,  $d = 3.29$ . In short, the video

**Table 3. Correlations between Mood States and Motivation During Training ( $n = 65$ )**

	Positive Mood	Neutral Mood	Negative Mood
Task relevance	0.58 **	- 0.52 **	- 0.16
Flow	0.51 **	- 0.37 **	- 0.34 **

\*\* $p < .01$

**Table 4. Means (and Standard Deviations) for Task Success Before, During and After Training**

Pre-test	Training	Post-test	Retention-test
<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
21.3% (22.0)	86.3% (16.8)	68.4% (25.9)	66.1% (28.7)

$n_{\text{pre-test}} = 65$ ;  $n_{\text{training}} = 63$ ;  $n_{\text{post-test}} = 61$ ;  $n_{\text{retention-test}} = 63$



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tutorial was very successful as a job aid. A regression analysis with initial motivation and cognition as *predictors for task performance during training* yielded no significant outcomes.

Table 4 further shows that students achieved a mean score of over sixty-five percent success in follow-up testing. From *pre-test to post-test* there was a significant and considerable increase in task performance,  $F(1,60) = 172.33, p < 0.001, d = 1.96$ . This was likewise the case from *pre-test to retention-test*,  $F(1,62) = 138.90, p < 0.001, d = 1.75$ . From post-test to retention-test the students' task performance remained relatively stable,  $F(1,58) < 1$ .

The video tutorial appeared to have satisfactory success in achieving learning. Substantial progress was recorded from pre-test to post-test and retention-test. The findings on the retention-test further indicated that the students' procedural knowledge development was lasting. It was not a temporary spike.

The difference between the effectiveness of the video tutorial as a job aid and for learning emerged in the decline in task performance after the practice tasks. From *training to post-test*, there was a significant and considerable decrease in task performance,  $F(1,60) = 37.15, p < 0.001, d = 0.82$ , just as there was for the comparison between *training and retention-test*,  $F(1,60) = 39.10, p < 0.001, d = 0.86$ .

A regression analysis with all measures before and during training as *predictors for the post-test* scores yielded the following results. Performance success on the practice tasks alone accounted for 18.7% of the variance,  $F(1,60) = 13.54, p < 0.001$ , and together with the pre-test score, explained 25.3% of the variance,  $F(2,60) = 9.80, p < 0.001$ . In short, only cognitive factors predicted the outcomes on the post-test.

A regression analysis with all measures before and during training, plus the post-test scores, as *predictors for the retention-test* scores yielded the following results. Post-test alone accounted for 34.4% of the variance,  $F(1,58) = 29.92, p < 0.001$ . Post-test together with training explained 44.3% of the variance,  $F(2,58) = 22.26, p < 0.001$ . In short, only cognitive factors predicted the outcomes on the retention test.

### Discussion and Conclusion

All measures of motivation indicated that the video tutorial was well received. The students predominantly

reported having been in a positive mood state during training. In addition, measures of flow and task relevance during training showed that students felt sufficiently challenged, as well as supported, by the video tutorial.

The finding that task relevance during training was predicted by task relevance prior to training, and flow by initial self-efficacy, signalled that the video tutorial was well attuned to the students' expectancies. More generally, the findings for motivation suggested that the eight design guidelines on which the video was grounded sufficiently address user affect. Clearly, the present study could not test this claim, nor could it point out which are the most critical guideline(s). For that, controlled experimental studies are needed.

The correlational measures indicated that all measures of motivation during training were related significantly with each other. In addition, the nature of the relationships made sense. That is, when students were more appreciative of task relevance and of their flow experiences during training, they also more often reported having been in a positive mood state. The correlations were moderate, as one probably should expect. Very low correlations would be surprising and counter-intuitive. Very high correlations would suggest that the motivational measures were indistinguishable.

In short, the outcomes for motivation during training bode well for the acceptance of similarly designed video tutorials. That is, once students have gained access to such a tutorial, they are likely to process the videos that it contains right through to the very end. Although there is no proof, the guideline to keep videos short, preferably within a 1-minute range, could be critical in this respect.

The findings indicated that the video tutorial served as an effective job aid. After having seen the videos, the students' task performance success rose from an initial low 21% score to a high of 86%. The video presumably provided most students with their first exposure to the proper method of performing a particular formatting task in Word. However, the video may also have occasionally just jogged the student's memory for a (partially) forgotten procedure (compare Merkt, Weigand, Heier, & Schwan, 2011). For performance during training it does not matter whether the video served as an introduction, or as a memory aid. What does matter is whether it effectively supported task achievement. The findings clearly indicated that it did.

Furthermore, the regression analysis showed that success during training was not affected by the students' initial cognition or motivation. Presumably, it was the video that made the difference.

To further investigate the usage of the video tutorial and to inform design practices, it would have been useful to log the students' actions with screen recording software (for example, Camtasia). These data could have yielded valuable insights about the frequency of the use of video controls for speeding up or slowing down the instructions. In addition, student logs could have revealed how often the videos were consulted during practice tasks, and how the students searched to find the relevant video fragment for information about individual task actions. We did not gather student logs because of practical constraints. Much of our empirical work on software training is done in regular schools, most of which have relatively older computers that do not mix well with recording software. In short, we did not log student actions to prevent computer hiccups and crashes.

The findings further showed that the video tutorial also served its role as a support for learning effectively, with post-test and retention-test scores of 68% and 66%, respectively. Clearly, these findings leave room for improvement. But set off against the initial score of 21%, the change was both statistically significant and substantial. There are probably two reasons why the scores for acting as a job aid were higher than for learning.

One explanation could relate to a difference in context. In testing, method selection was not cued by a video immediately preceding task performance. It was only during testing that the student needed to know which method went with which problem. During training this issue simply did not arise because there was a perfect alignment between task instructions in the video and the ensuing practice task performance. Both invariably involved the same formatting task and method. That is, when the video instructed the student how to indent paragraphs, the training task also asked the student to indent paragraphs, and so on. In testing, the context was different. All formatting tasks were presented at once, which made them not so neatly aligned and pre-signaled regarding the appropriate solution method as in training. Testing thus required the student to select the proper method from among the array of methods that had been taught. That is, only during testing did the student have to know that the

right method for indenting paragraphs involves usage of the 'First Line Indent,' rather than the 'Hanging Indent,' or the 'Left Indent.' In other words, testing required students to make the proper choice of method for each formatting task. In training this was almost a dead give-away. One might consider it to be an omission not to teach the student about selection rules in the video, or to exclude 'trick' formatting tasks in training files. However, since this might have entailed the risk of confusing the student, we chose not to do so.

Another explanation is that it is harder to achieve learning than to act as a job aid because of the way these two are measured. The proper way to measure acting as a job aid involves an examination of task performance with the instructions present. In contrast, testing for a learning effect requires an absence of outside help, because it should assess acquired knowledge stored in the user's long-term memory. Thus, the lower scores for learning may have to do with the user's memory. There can be many reasons why a user has less than perfect recollection of solution methods. Among these is that the user may have failed to encode, organize and/or integrate some information from the video during training. After training it may also be too difficult for the user to recall or reconstruct the right solution from memory.

Surprisingly, not a single motivational measure was found to predict task performance. For a long time, work on multimedia learning has concentrated on cognitive processes. The introduction of CATLM (Moreno, 2006, 2009) illustrates an attempt to complement this cognitive view on learning with motivational factors, among others. An important new facet in this more recent multimedia research concerns the motivational mediation assumption, which holds that 'motivational factors mediate learning by increasing or decreasing cognitive engagement' (Plass et al., 2014). This assumption was examined in the present study. The finding that only cognitive factors predicted these outcomes is perhaps a signal that research still has a long way to go to find ways to integrate and measure motivational and cognitive processes in multimedia learning. In other words, as suggested by Magner, Schwonke, Alevén, Popescu, and Renkl (2014), the influence of motivational mediators on learning may require better process data and more complex data analysis methods than those used in the present study.

We probably need to examine more closely how users' motivation influences their decision to engage in

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task execution and to persevere when there are obstacles, and how this contributes to learning. The positive reports of motivation found for the video tutorial provide a good basis for taking up that challenge.

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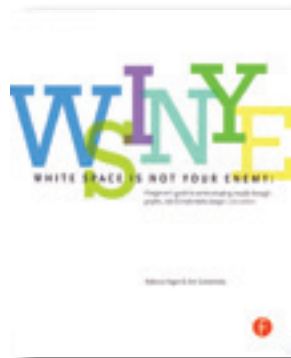
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## WSINYE: White Space Is Not Your Enemy—A Beginner's Guide to Communicating Visually through Graphic, Web & Multimedia Design

Rebecca Hagen and Kim Golombisky. 2013. 2nd ed. New York, NY: Taylor & Francis. [ISBN 978-0-240-82414-7. 288 pages, including index. US\$39.95 (softcover).]



*WSINYE: White Space Is Not Your Enemy* is a “comprehensive introduction” to graphic design for “any communications major, track or sequence, across traditional and new media formats”—a “concise and practical source surveying the fundamentals for any

platform for anybody” (p. xx). And indeed, Hagen and Golombisky succeed in these goals. This book is immediately useful for students or professionals who need to learn graphic design.

The text begins by reviewing basics of design such as “form follows function” and “design drives visual culture” (pp. 2-3). It then discusses how the computer has democratized graphic design, how the Web “changed everything for graphic designers,” and how designers should know the rules, but “break the rules if [they] have a reason” (pp. 5-7). A recurrent theme is that although computers appear to make everyone “a fluent multimedia and visual communication designer,” the “reality” is that only those who have developed some in-depth design skill—such as knowing not only the rules, but when to break them—will produce truly effective graphics (p. 260).

Subsequent chapters introduce specific skills “to begin executing assignments” (p. xix), such as those suggested in the “Try this” section ending each chapter. There is an implicit emphasis on the primacy of audience, as illustrated in the “works-every-time layout,” which shows how the designer should, for Western audiences who read left-to-right and top-to-bottom, develop the design in seven sequential steps—lay out generous margins, columns, positioning visuals at the top of the layout, the cutline directly underneath, the headline under that, then the copy in columns below

that. This “no brainer” method can be used as a learning device or as a way for the harried and graphically untrained professional to create a “layout that never fails to communicate” (p. 27).

Copious illustrations and visual examples accompany the explanations and *WSINYE* follows its own advice by using lots of white space to surround, position, and focus the reader’s attention, much as students would do in designing their own graphics to complete an assignment.

The book purposely avoids the dry, academic presentation common to textbooks that students “don’t bother to read” (p. xviii). The look-and-feel is intensely visual, as expected, and highly colorful, illustrating its own principle that “21<sup>st</sup> century people want quick, handy chunks of visual communication” (p. 160) whether in print, online, or on mobile devices.

The tone is also “intentionally light-hearted and conversational,” unlike traditional textbooks (p. xviii), with expressions like “No need to go gonzo” (p. 165), “Sir Isaac Newton of falling-apple-equals-gravity fame” (p. 115), and “Glom onto a mentor” (p. 261). This approach generally avoids “talking down to anyone” (p. xviii), but the “fast, effortless read” intended actually introduces students to a substantial amount of technical detail in font design, printing, multimedia, storyboard, color, web design, and paper technology—all in less than 288 pages.

Instructors, students, and professionals will value *WSINYE* for its concision, lively tone, direct, practical advice, plethora of examples, and a helpful glossary. A companion Web site accompanies the book.

### Donald R. Riccomini

Donald R. Riccomini is a member of STC and a lecturer in English at Santa Clara University, where he specializes in teaching engineering and technical communications. He previously spent twenty-three years in high technology as a technical writer, engineer, and manager in semiconductors, instrumentation, and server development.

## Loaded Words

Marjorie Garber. 2012. New York, NY: Fordham University Press [ISBN 978-0-8232-4205-4. 234 pages, including index. US\$26.00 (softcover).]



The title *Loaded Words* is slightly misleading because it is a collection of previously published essays. You learn this from the Acknowledgments, if you read them. And, this book has none of the traditional book elements as opposed to a collection: Preface, Introduction, and Conclusion. Adding “And Other Essays” would solve the confusion. But,

once you realize this anomaly, you will find some interesting points about language.

Garber collects 15 of her essays from both academic and non-academic sources. The first essay—she calls the essays chapters—introduces what she sees as loaded words, what they are, how they are used, what they contain, and so forth. Loading refers for her to the narrow application of the word, and empty to a broadening of that usage. Empty words become dead modifiers (and she admits a prejudice against nouns as adjectives). One culprit she finds in converting loaded words to empty ones is advertising.

Beginning with essay/chapter 2, she discusses a wide range of topics, but always seems to return to her specialties: Shakespeare and the humanities. Each essay either overtly or subtly argues for the importance of the humanities in post-secondary education. So, if your background or interest is in Shakespeare or the humanities after your technical communication work, this collection should be enjoyable reading.

From a communication theory point of view, Garber’s argument reminds one of the Sapir/Whorf hypothesis that argues, in its strong form, that reality is defined and described by the language that a person uses. In an essay entitled “Our Genius Problem,” she says, “The words we use shape the way we think” (p. 139). As for the humanities and their importance, she tells us in “After the Humanities,” “What distinguishes the humanities is their methods of analysis, interpretation, and speculation—rather than a strictly empirical investigation” (p. 187).

The other chapters directly or indirectly address these two issues. For example, “A Tale of Three *Hamlets*;

or, Repetition and Revenge” (3); “Shakespeare in Slow Motion” (4); “The Shakespeare Brand” (5); and “After the Humanities” (15).

Garber does not tell us her assumed reader, but one can easily infer it from the original sources of the essays: an academic, possibly an advanced undergraduate student, certainly graduate students, and a range of faculty members. Technical communicators would need a background in the humanities, especially literature, to be comfortable with the essays. Yet, technical communicators can find some interesting pieces relevant to their work. For example, the first essay on loaded words where Garber discusses how words become loaded and how the loaded meaning changes over time. Her examples include “knowledge,” “belief,” “wisdom,” “leadership,” “creativity,” “doubt,” “debate,” among others.

In summary, if your training is in the humanities or you have an interest in them, then you will find this collection interesting. If not, then only that first essay is of value, and is that enough to justify buying the book?

### Tom Warren

Tom Warren is an STC Fellow, Jay R. Gould Award for Excellence recipient, and professor emeritus of English (technical writing) at Oklahoma State University, where he established the BA, MA, and PhD technical writing programs. Past president of INTECOM, he serves as guest professor at the University of Paderborn, Germany.



## The Project Management Tool Kit: 100 Tips and Techniques for Getting the Job Done Right

Tom Kendrick, PMP. 2013. 3rd ed. New York, NY: AMACOM Books. [ISBN 978-0-8144-3345-4. 272 pages, including index. US\$19.95 (softcover).]



With author Tom Kendrick, a program director for the project management curriculum at UC Berkeley Extension, my guess is that *The Project Management Tool Kit* is meant for both classroom and reference use and is effective for both. As an award-winning PMP-certified author and someone who taught and presented at conferences and

universities and spent nearly 40 years in the field including 20 years with Hewlett Packard in project management-related roles, Kendrick has great credentials for writing the book.

What does Kendrick feel is worth noting in this third edition? He updates, as you would expect, to show the latest changes in *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* as he goes through his 100 tips.

With roughly two sheets for each of the 100 tips, this format works for me. I like the short chunks. The alphabetical arrangement is also to my liking, as I could quickly find items of interest. The index helps with that also.

Communicating informally—one of the 100 topics—caught my eye as I often wonder if it is a good idea when dealing with a project. Should I chat informally with members of the team? Is structured communication that is clear the only way to be effective? According to Kendrick, communication that is informal and unstructured—“periodic person-to-person communication without a specific purpose” is a good idea. It results in “good team relationships, fewer misunderstandings, and early warning of potential problems” (p. 25).

These ideas drew me into the topic. The author continues by stating that too much of a good thing can be bad. “While overuse can reduce productivity and be annoying, judicious use of instant messaging and social

media can enhance trust, overall relationships, and team cohesion” (p. 25).

This topic reflects the communication process category in the PMBOK. Other PMBOK topics—all covered in *The Project Management Tool Kit*—include general, leadership, teamwork, control, scope, time, cost, quality, human resource, risk, procurement, and stakeholder management. With other topics as interesting as the informal communication one, the book is a good reference either for someone familiar with project management topics or someone just starting out.

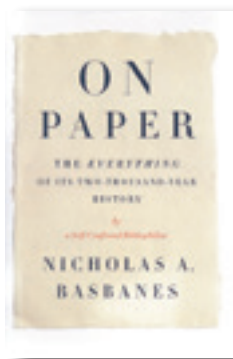
Agile—a topic of interest to many today—appears in a short, sweet entry showing it in a flow chart as an iterative type of life cycle. Short and sweet coverage appears in *The Project Management Tool Kit: 100 Tips and Techniques for Getting the Job Done Right* throughout.

### Jeanette Evans

Associate Fellow Jeanette Evans is active in the NEO community, serving as a co-chair on the academic relations and newsletter committees. Holding an MS in technical communication management from Mercer University, she has published in *Intercom* with articles such as “What We Can Learn from Project Managers” and presented at various STC events.

## On Paper: The Everything of Its Two-Thousand-Year History

Nicholas A. Basbanes. 2013. New York, NY: Alfred A. Knopf. [ISBN 978-0-307-26642-2. 430 pages, including index. US \$35.00.]



Technical communicators should be interested in Nicholas Basbanes' *On Paper: The Everything of Its Two-Thousand-Year History* because it is a major feat of technical writing and because we owe such a debt to paper. Basbanes writes about the history of paper in such an interesting way, combining it with his own personal research stories. For example, when he talks about papermaking in Japan, Basbanes describes his trips to the

mountainside villages, where small family papermaking mills exist because of the water purity.

Each chapter in *On Paper* covers a different part of the paper trail: its origination in China and development into a fine art in Japan; its history in the Arab world where Islamic calligraphy took full advantage of it; its back story in American history, where diarists such as John Adams documented the founding of our country; its status in current day industry, with such diverse uses as toilet paper and printing paper; the use of paper in the engineering of guns and the production of cigarettes; how lawyers used it to track down and convict criminals as in the Nuremberg trials; its importance for the creative genius of Leonardo da Vinci and Thomas Edison; and its beautiful use in the art of origami.

Basbanes spends two special chapters on the role of paper in September 11th and on the future of paper. He demonstrates how the September 11th Memorial and Museum was heavily dependent upon the recovery of papers from our national tragedy.

His chapter on the future of paper leaves something to be desired. In his discussion with Harvard librarian and author Robert Darnton, Basbanes examines how the younger generation does not have the same love of libraries, preferring instead to spend their time online. I teach students who graduate from college without ever stepping foot into the library. Basbanes acknowledges the problem, yet he doesn't really address it.

*On Paper* is summed up succinctly in the following sentence: "A refrain expressed often in these pages is that paper is plentiful, inexpensive, and portable; if made well, it resists tearing and can be creased into compact shapes that are useful for currency, correspondence, and cleverly conceived three-dimensional objects" (p. 300).

As much time as we spend with paper, even in our electronic systems that mimic it such as PDFs—even as I type this review, it is made to look like a piece of paper—technical communicators would do well to study its colorful history, and to ponder a future that is intent to get rid of it.

### Charles R. Crawley

Charles R. Crawley spends his days creating electronic documents for Rockwell Collins in Cedar Rapids, Iowa. His debt to paper is enormous and he longs for the days when this journal was printed on paper.

## On Looking: Eleven Walks with Expert Eyes

Alexandra Horowitz. 2013. New York, NY: Scribner. [ISBN 978-1-4391-9125-5. 310 pages, including index. US\$27.00.]



Sight is so basic that when we have it, we take it for granted. Yet seeing is a learned skill that requires an ability to winnow one or a few signals from the visual chaff by knowing what deserves our focus. In *On Looking: Eleven Walks with Expert Eyes*, Alexandra Horowitz takes us to explore her New York neighborhood with expert seers (and one important non-expert) to reveal the ways that different people focus and their different focal priorities. Her guides: geologist, typographer, illustrator, naturalist, wildlife researcher, urban sociologist, doctor, blind woman, sound designer, and dog. The difficulty of perceiving any situation holistically without the benefit of multiple guides quickly becomes clear. Horowitz learns to draw inferences from environmental clues that go beyond literal sights, including clues derived from the absence of overt signs. She learns that everything we can see arrived somehow at its present state, but that it takes training to detect this history and the many events occurring behind the scenes of the main event we're focusing on with untrained eyes.

Horowitz's non-expert guide is her toddler, who's just learning to walk and integrate what he sees into a worldview, and who teaches Mom the pleasure of seeing the world anew through a child's eyes. Unexpectedly, this chapter provides powerful insights for technical communicators: that our audience, whatever their age, approach our subject with the naïve, untrained eyes of a toddler, and that our goal is to teach them to see what we've learned to see with our expert eyes. Each sees the world differently—our visual priorities differ—but with the right guide, anyone can learn to see clearly. Experts follow (often nonlinear) paths that are invisible to us, but can teach us to see and follow those paths. The sound designer and blind woman remind us how many unseen (literally "invisible") paths we miss until someone reveals them.

As technical communicators, we must decide what to reveal and how. We become the audience's expert guide in learning to see, and to succeed, we must first

understand what they “do not see” so we can account for that untutored perspective. When we reach out to an audience, it’s like dealing with Horowitz’s toddler: we provide a safe framework in which to re-envision their world, whether by seeing in new ways or in old ways they’ve forgotten. Our communication prepares them to see by displaying what to expect, the context in which to expect it, and how to recognize when the unexpected occurs.

Horowitz’s writing is friendly, nontechnical, and as peripatetic as the wide-eyed author’s physical wanderings. As a scientist, she can’t resist delving into the science, but it’s unintimidating and an ironic reminder of how our preoccupations bias what we share with others. Besides being a pleasant travelogue, *On Looking* is a friendly reminder to periodically look at our world with fresh eyes.

#### Geoff Hart

Geoff Hart is an editor and information designer who cures his myopia through spectacles and periodically relearning how to see.

### Design for Information: An Introduction to the Histories, Theories, and Best Practices Behind Effective Information Visualizations

Isabel Meirelles. 2013. Beverly, MA: Rockport Publishers. [ISBN 978-1-59253-806-5. 224 pages, including index. US\$40.00 (softcover).]



Occasionally, technical communicators need to present large amounts of data visually to convey an impression rather than provide an archive. In these cases, such as data from the Census, the basic graphical forms are insufficient. That is when they need structures that

can handle massive amounts of data.

Meirelles’ *Design for Information: An Introduction to the Histories, Theories, and Best Practices Behind Effective Information Visualizations* addresses such structures. In six chapters, she shows how to develop formats such as

trees and hierarchies, networks and relational structures, maps and spatial structures, spatio-temporal structures, and text structures. Many structures are created by computer programs. Note that “structure” is the dominant word in chapter titles and text because that is what she calls the various forms.

Meirelles’ audience includes advanced students who have had at least one other course on visual representation of data. But, professionals can gain considerable insight in how these various structures are built, used, and interpreted.

*Design for Information* is well-prepared with clay-based paper and saddle stitching. One problem I had, though, was that the text font is Sans Serif, 8/9, and that quickly tires the eyes. Another issue is that Meirelles fully intends for the examples to create impressions rather than provide specific information. But, that could be positive when she wants to demonstrate the structures rather than the knowledge of what the visual contains. For those wanting the enlarged examples, she provides the URLs for many of the visuals and references for the rest.

One interesting aspect for readers is Meirelles’ discussion of the history of the structures, complete with samples. Students especially will get a good sense of how the structure has evolved.

All the chapters have relevance for technical communicators. But the chapter on text structures (chapter 6) might attract more attention than the others. To present text as visuals, it has to be treated as data that Meirelles calls “nominal data.” Some of the ideas on visualizing text might be familiar to those who have studied linguistics. For example, concordances and other word frequency measurements as maps or trees are common. But she expands text visualization to include not only words but syntactic structures, language models, and grammars. Most interesting is the visualization of semantic meaning. To demonstrate the different structures, Meirelles uses her Introduction and presents several visualizations of it, incorporating space, font, size, color, and other visual features to show relationships.

If she really intends a wider audience than students for another edition, I would suggest a glossary. Meirelles does define terms as she explains the structures, but gathering them, in one place would be a benefit. Also, a list of computer programs and how they may be obtained would also be appreciated. All in all, *Design for*



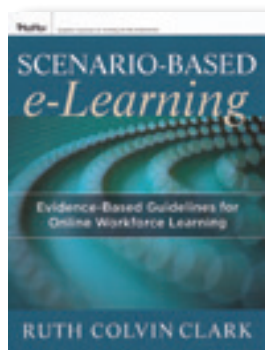
*Information* is a bargain especially for the information it contains and the price.

### Tom Warren

Tom Warren is an STC Fellow, Jay R. Gould Award for Excellence recipient, and professor emeritus of English (technical writing) at Oklahoma State University, where he established the BA, MA, and PhD technical writing programs. Past president of INTECOM, he serves as guest professor at the University of Paderborn, Germany.

## Scenario-Based e-Learning: Evidence-Based Guidelines for Online Workforce Learning

Ruth Colvin Clark. 2013. San Francisco, CA: Pfeiffer. [ISBN 978-1-118-12725-4. 248 pages, including index. US\$75.00 (softcover).]



Have you always wanted to design a training program where the learner can practice handling real-life work situations in an interactive, yet risk-free environment? If so, then *Scenario-Based e-Learning: Evidence-Based Guidelines for Online Workforce Learning* provides the ideal blueprint for constructing such a course.

Clark defines scenario-based e-learning as “a preplanned guided inductive learning environment designed to accelerate expertise in which the learner assumes the role of an actor responding to a work-realistic assignment or challenge, which in turn responds to reflect the learner’s choices” (p. 5)—basically, an environment where learners can make mistakes and learn from them without causing real harm. According to Clark, scenario-based e-learning is best suited for “strategic tasks that require judgment and tailoring to each new workplace situation” (p. 18).

Each chapter discusses the steps to build such a course, including identifying tasks best suited for scenario-based e-learning; determining what media is best suited to convey the message; defining scenario outcomes, creating a guided discovery experience to avoid “unproductive trial-by-error explorations” (p.73);

eliciting information from subject matter experts to help learners better understand the rationale behind the subject; and implementing a course.

Throughout *Scenario-Based e-Learning*, Clark includes several e-learning examples from a variety of companies. In doing so, she not only illustrates the course development process, but more importantly, demonstrates that scenario-based e-learning does not necessarily require costly or sophisticated elements. Indeed, one example is based on content from presentation software slides.

This book also contains several well-designed tables that summarize key concepts. Notable examples include definitions of Clark’s eight scenario-learning domains in workforce training, typical learning objectives by domain, and the six types of knowledge to elicit from subject matter experts.

Besides the rich examples and informational tables, *Scenario-Based e-Learning* most notably encourages active reader participation through thought-provoking questions and detailed worksheets. At the beginning of each chapter, Clark poses questions that invite readers to apply their own knowledge in understanding various characteristics of scenario-based e-learning. In Chapter 9, she presents five statements regarding evaluations and invites the reader to determine which statements are true. Clark also provides worksheets at the end of each chapter for readers to help define and develop their own scenario-based e-learning content.

This book is ideal for instructional designers at all levels of expertise, even those new to the field, since it explains basic tenets of instructional design. I recommend reading this book first cover-to-cover for those new to the field to understand the key concepts, and then return to specific chapters as needed. More-experienced instructional designers can skim this basic information and go directly to the abundant worksheets, tables, and examples.

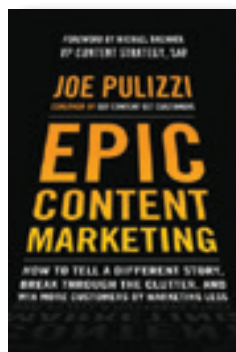
### Jamye Sagan

Jamye Sagan has over 10 years of technical communication experience. She is the pharmacy communications advisor for H-E-B Grocery Company in San Antonio, TX. A Senior Member, she is active with the Instructional Design & Learning SIG, where she has contributed several Summit session reviews for the SIG’s newsletter.



## Epic Content Marketing: How to Tell a Different Story, Break through the Clutter, and Win More Customers by Marketing Less

Joe Pulizzi. 2014. New York, NY: McGraw-Hill. [ISBN 978-0-07-181989-3. 332 pages, including index. US\$25.00.]



*Epic Content Marketing: How to Tell a Different Story, Break through the Clutter, and Win More Customers by Marketing Less* is a well-thought out book on content marketing, or creating a narrative for a brand. The book guides you both through the history of the concept through to present thoughts and industry leaders.

Examples of every concept are

supplied, including Web links, for every section. While it is not possible to cover every element of a good strategy for a specific business in this book, it does show the most important elements and even gives some tools on how to analyze your business and get what you need for a complete content marketing plan.

Pulizzi clearly believes in what he's selling. *Epic Content Marketing* is enthusiastic and uses narratives where it can as examples. The Web links at the end of each chapter are current and stable (most of them are large and reliable companies), with each tying into the text itself.

*Epic Content Marketing* does have a few weak moments. Pulizzi is unnecessarily redundant and his logic does not seem particularly sound, particularly in the first chapter. Once the reader pushes past that, it opens up to a read that is both reliably informative and genuinely enjoyable.

### Tomus Cone

Tom Cone is a student in the technical editing program at the University of Alabama-Huntsville. His fascination with the Internet goes back to 1994, where he worked as an analyst for the Air Force. Since then his studies have included journalism and Web design.

## WordPress: The Missing Manual

Matthew MacDonald. 2013. Sebastopol, CA: O'Reilly. [ISBN 978-1-449-30984-8. 547 pages, including index. US\$29.99 (softcover).]



Have something to say? Need an online platform to reach a big audience—either with your thoughts and opinions or your product?

If you answered yes to those questions, you're a good candidate to establish a WordPress blog or Web site. WordPress, according to its own Web site, is "web software

you can use to create a beautiful website or blog. We like to say that WordPress is both free and priceless at the same time." [<http://timepiecedemo.wordpress.com/>] This cloud Web site software is appropriate for individuals or businesses.

Can you learn everything you need to know using the WordPress online reference pages? Probably—thousands have. But *WordPress: The Missing Manual* is the friendly, helpful, 550-page desktop resource that you want for a logically presented introduction to the software and that you need if you plan to take WordPress to a more advanced level.

MacDonald has added another outstanding volume to the O'Reilly missing manual series. He's divided the book into five sections, each with two to five chapters: starting out, building a blog, supercharging your blog, from blog to Web site, and appendixes. The chapters offer easy-to-follow explanations on, for example, signing up; creating posts; selecting and editing a theme, pages and menus; allowing comments; and collaborating.

He writes in the second person so the book is all about you, the reader. The text is crisp and clear. MacDonald's explanation, for example, of "high-quality" URLs takes eight pages (115-122), yet you come away with a complete understanding of how WordPress generates URLs, how to create permalinks (and why you'd want to), and how to make a URL even shorter.

Consistent with the volumes in the missing book series, the page layout is excellent, with many examples and with a welcome set of tips and tricks sprinkled throughout. They are labeled either as a note, "power users' clinic," "gem in the rough," "plug-in power," "up

to speed,” or frequently asked questions. Each serves a slightly different function, naturally; in spite of how many are provided, none are superfluous.

O'Reilly does not package a CD full of examples or URLs with the book. In the page devoted to the lack of a CD, the publisher claims this saves you \$5. Instead, all the reference materials are available online at [missingmanuals.com](http://missingmanuals.com). Handy, isn't it?

For the price of this book, it is a bargain and then some. WordPress bloggers and Web site developers will save much time and energy by having this outstanding resource on their bookshelves.

### Ginny Hudak-David

Ginny Hudak-David is the senior associate director in the Office for University Relations at the University of Illinois, the largest public university in Illinois with campuses in Urbana-Champaign, Chicago, and Springfield. She works on a variety of communications projects.

## American Modernism: Graphic Design 1920 to 1960

R. Roger Remington with Lisa Bodendstedt. 2013. London, England: Laurence King Publishing. [ISBN 978-1-78067-098-0. 192 pages, including index. US \$19.95 (softcover).]



Roger Remington's revised version of *American Modernism: Graphic Design 1920 to 1960* is a wonderful history of the importance and the impact of modernism on graphic design in America. Though the book's subtitle states that the time frame covered is 1920-1960, it actually covers information

from 1850 through the 1990s, but the most in-depth information is from 1920-1960. Other times are covered to set the background for the development of modernism in America or to explain its decline. The inclusion of background information helps to develop the story of the history of modernism in graphic design. The book also explains in detail the impact of the European modern movements and how they came to influence modernism in America.

Even if you are familiar with this time in American graphic design, you will likely learn about designers that you are unfamiliar with, or possibly learn more about the significant contributions that some of the lesser-known designers have made. Each chapter has examples of the work done by the designers covered and the captions that accompany the images are detailed descriptions that should not be overlooked. If you skip them, you will certainly miss out on some of the great information provided in the text.

There does appear to be a mistake in one of the image captions on page 64, where it describes Lester Beall's involvement with the Rural Electrification Administration. The information in the caption indicates that he was involved with the project from 1939-1941. Then on page 66, the information is corrected stating that Beall's involvement with the project was from 1937-1941. Despite this, the text contains detailed information about Beall's importance and contribution to American graphic design.

*American Modernism* was an easy read and filled with great information and details about various designers who contributed to the Modern movement as well as the technologies that had an impact on the movement. It was fun to read, despite being a history book, and its short length made it feel less intimidating than most design history books. This book will be great for students and designers who want to know more about the impact of the modern movement on the history of graphic design in America.

### Amanda Horton

Amanda Horton holds an MFA in Design and currently teaches graduate and undergraduate courses at the University of Central Oklahoma in the areas of design technology, design studio and history of graphic design. She serves as a book reviewer for *Technical Communication*.

## Every Page is Page One: Topic-based Writing for Technical Communication and the Web

Mark Baker. 2013. Laguna Hills, CA: XML Press. [ISBN 978-1-937434-29-8. 288 pages, including index. US\$24.70 (softcover).]



Mark Baker's book develops and promotes his concept of "Every Page is Page One" (EPPO) help topics. He argues that, because users expect to be able to search and navigate documentation as one resource, what he calls "information snacking behavior" (p. 3), technical communicators can no longer

"create help systems and manuals the way they did before the Web" (p. viii). In fact, Web-based documentation, because of its nonlinear nature, may be introduced to the user at any topic. Therefore, you need to treat every page as page one, or as the potential starting point, and include more introductory and contextual information in your topics. He positions EPPO as "both an information design pattern and a content navigation pattern," and the "dominant mode for finding and using information" (p. viii). He recommends organizing most content as if it is intended for the Web as this method will make it usable and navigable now and in the future.

The book is divided into three sections—1) Content In the Context of the Web, 2) Characteristics of Every Page is Page One Topics, and 3) Writing Every Page is Page One Topics. In section 1, Baker uses concepts like filtering, distribution, and information architecture to show how a help topic is a natural information format for the Web. Section 2 defines a topic and details the characteristics every good topic should have on the Web, including information mapping and DITA standards, self-containment, purpose, conformity, context, reader qualifications, and linking and findability. Section 3 explains how to use these characteristics in the writing process with the big picture in mind, available tool choices, and how to manage an EPPO project.

Although the book claims it is for a wide audience of "technical writers, information architects, content strategists, and anyone interested in designing information that will be consumed on the Web or in

the context of the Web" (p. viii), it's mostly a book for people writing online user assistance, which Baker acknowledges in his afterward. Overall, the book is very clear and well structured, and the concept of EPPO is easy to understand, but some experience in creating user assistance or technical authoring might be required to fully appreciate the book. However, it is an important contribution to the field and to the ongoing discussion about whether technical communicators focus enough on creating content that's actually of value to their users.

### Liz Pohland

Liz Pohland is an STC Senior Member, editor of Intercom magazine, and the director of communications for STC. She is pursuing her PhD in Texas Tech University's Technical Communication and Rhetoric program. Her research interests include museum studies, new media, and digital humanities.

## Design Thinking Research: Studying Co-Creation in Practice

Hasso Plattner, Christoph Meinel, and Larry Leifer, Eds. 2012. Heidelberg, Germany: Springer-Verlag. [ISBN: 978-3-642-21642-8. 278 pages. US\$139.00 (hardcover); US\$109.00 (ebook).]



*Design Thinking Research: Studying Co-Creation in Practice* is the second volume by researchers at the Hasso Plattner Institute of Design at Stanford University and in Potsdam, Germany. The institute's purpose, started in 2008, is to study ways of generating innovations through the process of design thinking.

The 14 chapters report results of research on methods and tools of design thinking with an emphasis on "co-creation," which presumes small, agile teams including both "hunters" and "gatherers," often working at a distance.

Design thinking offers an alternative to the inductive and deductive reasoning of traditional scientific inquiry and is especially applicable to ill-defined problems. It is improvisational and values brainstorming, prototypes, experimentation, user involvement, and an iterative process. Design thinking as a concept and practice emerged in the 1980s and



earlier, but the studies reported in this book aim to capture the interactions and moves and to optimize the practice, all in the pursuit of “ideas that sell.” A typical research question is “How do designers work?”

The studies are organized into four categories: road maps, creative tools and prototypes, distributed design collaboration and teamwork, and design thinking in information technology. Studies examine tools to encourage brainstorming and collaboration, team composition, prototyping, cultural concepts of creativity, and place. One study describes a “tele-board” for tracking design process history, useful for teams working asynchronously. Another studies how virtual collaboration behavior affects the quality of engineering processes. One repeated theme is that “communication within design teams and between design teams and reviewers is instrumental to successful design activity” (p. 90).

The circumstances of the projects on tools and prototypes are so particular to organizations or types of products that the results cannot yet be generalized. Still, some projects define concepts in innovation that could be useful to development teams reimagining documentation and the user experience. Several studies on the behavior and results of teams seem relevant. For example, one project researching how small teams make radical breaks contrasts “projective scoping” (framing the problem in terms of the contexts in which the original design is imagined) and “extractive scoping” (features of the original design are modified and improved). Teams that focus on contexts of use rather than product features are more likely to produce radical redesigns. Another study explores the role of cognitive style diversity among team members but finds that cognitive diversity has no clear-cut impact (positive or negative) on team performance.

My conclusion is that design thinking is highly relevant to technical communication and has already been incorporated through adaptations of human-centered design, collaboration, and multidisciplinary teams. Because *Design Thinking Research's* focus is on research rather than practice, other publications will offer a more practical introduction for now to the processes and tools of design thinking at work.

### Carolyn Rude

Carolyn Rude is an STC Fellow, a retired professor of technical communication (Virginia Tech, Texas Tech), and author of the textbook, *Technical Editing*.

## New Media Communication Skills for Engineers and IT Professionals: Trans-National and Trans-Cultural Demands

Arun Patil, Henk Eijkman, and Ena Bhattacharyya, Eds. 2012. Hershey, PA: IGI Global. [ISBN 978-1-4666-0243-4. 272 pages, including index. US\$175.00.]



*New Media Communication Skills for Engineers and IT Professionals: Trans-National and Trans-Cultural Demands* is designed to give engineers, information technology (IT) professionals, and scholars an overview of characteristics and skills that are now or will become important in the coming years. In the current

economy, one cannot assume that working in the USA translates into working only with Americans, for instance, because clients and business partners may reside in other countries, and being able to communicate and work with those people is integral to success.

Patil's book is divided into twelve chapters, each addressing a different communication topic for the engineer and information technology audience. The authors themselves differ between chapters, and all seem to be academic scholars in Malaysia, Australia, New Zealand, India, and Greece. The topics covered include the importance of communication skills for successful IT and engineering professionals, the nuances of linguistic and cultural differences in the workplace, technology literacy, digital teaching tools available and even an examination of writing across the curriculum (WAC) initiatives and how they apply to this specific subset of students. Each chapter is arranged much like an individual journal article, with extensive bibliographies at the end and a list of key terms and their definitions. The book's arrangement makes it read much like a collection of separate articles, which may hinder the overall usefulness in the sense that readers may not find each chapter helpful or useful. The chapter that examines English as a global business language (Chapter 5), for instance, is extremely interesting as a study of how one language becomes dominant over others in a global marketplace. Other chapters seem to be very basic conceptual overviews (Chapter 2, for



instance on education technology) better suited to a journal article than a hardcover text.

Which brings up the next salient point; the text has numerous mistakes in punctuation and sentence structure. The first chapter, designed to give an overview of the rest of the chapters, seems haphazard in its structure, almost as if the abstracts from each chapter were strung together with very little editing. The overall effect leaves the reader confused and disappointed and unfortunately, questioning the professionalism of the text that comes after. The same types of errors appear in other chapters, although not all. Many of the graphics in the various chapters are poorly produced, with faded lines and text too small to read. The book itself is also physically unwieldy—it measures 8-1/2 by 11-1/2 inches, which makes it difficult to transport, and the hardcover exacerbates that. Put together with the rather hefty price, *New Media Communication Skills for Engineers and IT Professionals* does not seem a sound investment. Those interested in these topics would be better off seeking a less-expensive, better-produced source.

### Carolyn Dunn

Carolyn Kusbit Dunn is an assistant professor at East Carolina University and an STC member. She teaches technical writing and her research interests are the use of technology in communication, risk and crisis communication, and discourse and power. She has worked in marketing and television journalism.

## UX for Lean Startups: Faster, Smarter User Experience Research and Design

Laura Klein. 2013. Sebastopol, CA: O'Reilly Media. [ISBN 978-1-449-33491-8. 206 pages, including index. US\$24.99.]



Laura Klein's *UX for Lean Startups: Faster, Smarter User Experience Research and Design* is a crash course in usability and user experience (UX) for entrepreneurs and designers, but is also applicable to technical communicators. Her humorous tone engages the reader without distracting from the content.

Like other Lean UX proponents, Klein's core advice is to engage in an iterative design process: product developers should hypothesize, test, and redesign—and then begin the whole process over again. The Lean UX process focuses heavily on testing hypotheses: “Instead of thinking of a product as a series of features to be built, Lean UX looks at a product as a set of hypotheses to be validated” (p. xvii). Klein divides her book into three major sections: validation, design, and production with each chapter having a summary at the beginning and a clear call to action at the end making it easy to follow.

Klein talks about validating the problem, the market, and the product. She emphasizes the importance of testing early in the design process before wasting resources on unnecessary features. First, she argues, you should use hypothesis testing to prove that a clear problem exists for a specific market of consumers; then, you build a product to solve that specific problem. One simple validation method is to create several landing pages (one-page dummy sites) for the product you want to sell; then use Google Analytics to see how many people click a buy or pre-order button or enter their e-mail address, which then gives you a clearer idea of whether you have a feasible market.

The second part of Klein's book focuses on the design process. Keep the users' problem in mind as you plan, test, and iterate. Every stage involves validating your hypotheses about how users will interact with your product. Klein recommends creating wireframes and interactive prototypes before creating a costly full-scale version of your product. Wireframes contain the basic layout and navigation options of the product so you can see how users respond to them, while prototypes are more involved, “interactive enough for users to make mistakes and recover from them” (p. 78). Testing with wireframes and prototypes helps you catch design flaws early and minimize wasted time and resources.

Finally, Klein explains the concept of a Minimal Viable Product (MVP), or releasing a product that has enough features to solve the user problem but to which you can still add features after iterative testing with early users. Once you've released an MVP, you should test one small change at a time to see where you can improve the product.

Overall, Klein's book introduces UX research. Although not highly theoretical, it brims with practical instructions, anecdotal case studies, and useful illustrations. I would recommend *UX for Lean*

*Startups* to technical communicators who want simple, straightforward advice for integrating UX research into their design process.

### Bonnie J. Shamp Winstel

Bonnie J. Shamp Winstel is a technical writer for a small software company in Huntsville, Alabama. She received her master's degree in English and Technical Communication at the University of Alabama-Huntsville in May 2013 and is now a New TC Professional member of STC.

## Playing with Type: 50 Graphic Experiments for Exploring Typographic Design Principles

Lara McCormick. 2013. Beverly, MA: Rockport. [ISBN 978-1-59253-817-1. 192 pages, including index. US\$40.00 (softcover).]



If you think playing with type means scrolling through the library of fonts on your computer, get ready to think again. The experiments in *Playing with Type: 50 Graphic Experiments for Exploring Typographic*

*Design Principles* don't even require the use of a computer. The experiments do ask readers to explore what type can do and what can be done with it.

The book's undercurrent is the idea that type, the letterforms themselves, is capable of communicating something beyond the words they make up. This is a familiar concept to typographers and designers, but may be new to someone outside of those fields. McCormick reinforces that idea in every experiment without ever saying, "I want you to understand type is more than just words." Instead, she puts readers into the position where they will make this discovery on their own.

McCormick takes no time in getting readers away from the idea that type is just words on a page or screen. The first experiment is designing a ransom note using type clipped from numerous printed materials. The experiment requires readers to consider the content of their message and the qualities of the type used to communicate that message. The medium is as important as the message. Ideally, both will work together, but

the book doesn't dwell on that. The point for now is in trying things out and seeing what happens.

One way where *Playing with Type* shines is how McCormick includes type experiment examples that are used as a product, logo, or brand. This detail emphasizes the idea that these approaches to typography aren't only fun, but also yield solutions strong enough for real world use. The experiments also show readers that this isn't a case where the layperson gets to tinker with type in one way while design professionals do something completely different. Rather, readers are asked to think about and use type in the same way designers and typographers do every day.

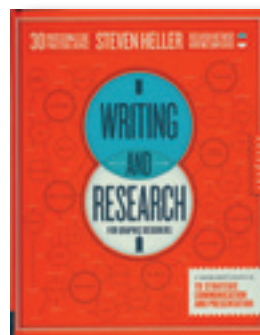
I have already recommended this book to design students struggling to figure out typography. I fit into that category myself. For me the experiments in *Playing with Type* were incredibly inspiring because they are typographic approaches that actually work and I can see working examples. The experiments are a low-stakes way to learn the concepts of effective typography and have fun doing it.

### Spencer Gee

Spencer Gee holds a master's degree in Composition and Rhetoric and teaches Freshman Composition at the University of Central Oklahoma. He also is working toward a degree in Graphic Design.

## Writing and Research for Graphic Designers: A Designer's Manual to Strategic Communication and Presentation

Steven Heller, Ed. 2012. Beverly, MA: Rockport Publishers. [ISBN: 978-1-59253-804-1. 176 pages, including index. US\$40.00.]



As someone who spans the boundaries of academics and practice, Steven Heller has a unique perspective on what graphic designers do. He lectures and oversees graduate programs at the School of Visual Arts in New York. Heller has authored, co-authored, and edited more than 100 books on graphic design, typography, and popular culture (including several for Rockport).

Heller begins by challenging a stereotype: that certain people become graphic designers specifically to avoid reading and writing. Not only is this stereotype grossly untrue, says Heller, but it crumbles amid the demands of contemporary design practice. “With increasing multimedia communication platforms opening all the time, reading and writing and, more than ever, research (a third imperative skill), are the designer’s essential three R’s” (p. 9). Heller’s career, beginning at 24 as the art director of the *New York Times* op-ed page, shows how writing, reading, and research complement graphic design practice.

*Writing and Research for Graphic Designers: A Designer’s Manual to Strategic Communication and Presentation* has five sections. The first section contains Heller’s advice on reading, writing, and research. For reading, Heller recommends that designers supplement recreational reading and news reading with writing on design. He exhorts readers to take notes and read carefully. Heller then suggests how designers can find their voices as writers. He lampoons the formulaic promotional copy used by many businesses and encourages writers to develop copy that is more musical, more poetic. Heller then describes how designers might conduct and benefit from both primary and secondary research. He includes two conversations with specialists in archival research on design.

In the second section, Heller provides an overview of areas where designers might want and need to write. These include journalism, criticism, public relations, blogging, academic writing, and writing in and about the design business. Heller incorporates pieces written by other designers, and he frequently follows these with brief reflections by their authors.

The third section is “How to Edit and Be Edited.” Heller explains what editors do and why writers need them. Heller interviews several experienced editors and provides visual and verbal examples to review. He also shows an article he wrote as it changed through editorial review.

Section four is “Writers Discuss Their Writing.” Heller again provides samples of design writing and author reflections. Section five provides examples of art and design that prominently incorporate text with images.

In his epilogue, Heller writes that writers face a readers’ market. Readers are discerning and they have many options, so writers must provide valuable content.

A selected bibliography of design and writing books follows the epilogue.

*Writing and Research for Graphic Designers* is not a how-to manual in the style of most writing guides. Instead, it is more of a sourcebook that designers can use to get inspiration, generate ideas, and gain perspectives shared by design-writing experts.

### Russell Willerton

Russell Willerton is a tenured member of the English faculty at Boise State University. He is writing a book on ethics and plain language for Routledge.

## face2face: Using Facebook, Twitter, and Other Social Media Tools to Create Great Customer Connections

David Lee King. 2012. Medford, NJ: Information Today, Inc. [ISBN 978-0-910965-99-6. 198 pages, including index. US\$24.95 (softcover).]



The evolution of social media from the personal realm into the business world has made it imperative for businesses to understand how to use them to communicate with customers. David Lee King says in *face2face: Using Facebook, Twitter, and Other Social Media Tools to Create Great Customer Connections*, that many

organizations not only have yet to learn how to use social media but have to learn also how to use it as two-way communication tools to deepen connections with their customers.

He advocates the importance of “being human” in a digital world by applying age-old human techniques such as communicating, listening, and sharing. Drawing from King’s experience with blogging about social media and emerging trends, he provides specific, practical techniques and real-world examples for an organization to transform itself into a “face2face” organization.

King says organizational blogs and social networks are a great way to connect with customers. He uses real blog examples to demonstrate how they appear more interactive and human by using a conversational



writing style and by encouraging and enhancing participation. King even shows ways to handle ugly or offhand situations.

Besides text-based communication, King strongly recommends using pictures and videos to create the human online presence. He offers practical tips from techniques for capturing quality pictures and videos to where and how to post them.

*face2face* also discusses the benefits of creating an online community presence, especially when promoting a cause or an action. King describes the tools that are available as well as shows ways to organize and sustain the mission. He devotes an entire chapter to listening and responding to online conversations and the tools that facilitate good listening practice.

King recommends using the informality of social media to let an organization establish a personal customer relationship. Again, he provides examples from the real world and their proven techniques, and shows how human-centered design can bring in customers. King then gets into details with specific tools such as Facebook, Twitter, and YouTube to create this interactive relationship. The last few chapters outline ways to get the process started, how to measure success, and how to deal with critics.

Pick up *face2face: Using Facebook, Twitter, and Other Social Media Tools to Create Great Customer Connections* if you are new to social media and looking for ways to learn how to use them to create deep, rewarding customer relations. However, don't wait too long—in the fast-changing world of social media, some of the recommendations and tools might get outdated!

### Preeti Mathur

Preeti Mathur is an STC Associate Fellow and co-manager for the STC Instructional Design & Learning SIG (IDL SIG). She works as an independent consultant, where she develops technical training and documentation for several industries.

## ReaderCentric Writing for Digital Media: Theory and Practice

David Hailey. 2014. Amityville, NY: Baywood Publishing. [ISBN 978-0-89503-814-2. 288 pages, including index. US\$59.95 (softcover).]



Usability studies experts have conducted extensive research on the navigability of Web sites. However, few have approached it with a concern for content quality like David Hailey does. Writing quality problems abound on the Internet and they become more complicated when involving complex, complicated information systems. Earlier

usability gurus such as Nielsen, Redish, and Krug focused on the importance of assisting users to find the information they need quickly and efficiently. Hailey argues that this is only one style of Internet writing, which he calls user-centric writing. The other two styles are quality-centric, for people who want to be entertained and learn, and persuasion-centric, for those who need to be moved to action or sold on a product or idea.

In *ReaderCentric Writing for Digital Media: Theory and Practice*, Hailey discusses the difficulties and opportunities facing writers created by introducing complex, complicated information systems to the Internet. Many writing jobs are potentially at risk since computers can assemble many texts that once required humans. Writers are in the best position to conduct quality control on these machine-assembled texts, which some Web sites are currently producing with embarrassingly poor quality. Hailey uses several Web examples to demonstrate that both excellent writing and terrible writing exists on the Internet. One need only briefly analyze these texts with the correct tools to realize what the issues are.

Hailey argues that each Web site has multiple genres. Our traditional genre model as applied to novels doesn't work as well with Web sites because they contain a greater variety of genres and subgenres in their content. I don't entirely agree with Hailey on his assertions that each object and paragraph on a given Web page can be a different genre, since to me this defeats the purpose of genres, which is to categorize information into neat boxes. Sure, these boxes are artificial and malleable, but



why even bother with them if they can be altered from paragraph to paragraph? Regardless, Hailey's points on genre theory as applied to Web sites is food for thought, and his advice to look at the exigencies, urgencies, audiences, purposes, rhetorical stances, and structures of Web sites rather than focusing so much on their genres is invaluable. He presents several rubrics for analyzing these Web site aspects, which may be the most important tools *ReaderCentric Writing for Digital Media* offers.

Hailey's writing style is relaxed and conversational, which makes the material approachable and engaging. Although the need for writers to engage the code, non-alphanumeric content, search engine optimization, and metadata of Web sites can often be intimidating, Hailey approaches such topics in a friendly manner that makes these initially difficult concepts more inviting.

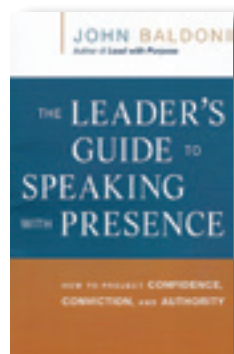
*ReaderCentric Writing for Digital Media* is an excellent read for any Internet writing or user experience student, as well as any practitioners seeking guidance on how to make themselves more marketable and valuable.

### Tom Ballard

Tom Ballard is a PhD student in rhetoric and professional communication at Iowa State University (starting August 2014). He worked as a technical writer for three and a half years while earning his master's degree in English with an emphasis in technical writing from Utah State University (USU). He was the editor of *Synopsis*, the journal of the STC USU chapter.

## The Leader's Guide to Speaking with Presence: How to Project Confidence, Conviction, and Authority

John Baldoni. 2014. New York, NY: AMACOM. [ISBN 978-0-8144-3379-9. 68 pages, including index. US\$6.95 (softcover).]



When technical writing changed to technical communication, practitioners and academics recognized that more was involved in communicating needed information than written texts. Oral presentations were part of the process—from impromptu talks to small groups to informal presentations to

small groups to formal presentations at corporate meetings and national conferences.

Involving much more than mechanically presenting information, successful presentations also involve credibility. Impressions of leadership are often formed based on the leader's presentations. Baldoni, in *The Leader's Guide to Speaking with Presence: How to Project Confidence, Conviction, and Authority*, offers advice on, among other topics, presenting as a leader; making your audience feel welcome; leading your presentation rather than having it lead you; mastering the art of meeting and mingling; and avoiding nuance when speaking. Most of the 12 short chapters include action steps as questions for you to answer when planning. The "Handbook on Communicating Leadership Presence" summarizes the questions leading to a positive image of the speaker, which leads to the speaker's credibility and leadership. Baldoni's point, then, is to help you develop the credibility that demonstrates your leadership qualities.

Details, however, are in short supply, mainly because this type of book is meant to be sold at the author's workshops and consultations. Yet, for the price and based on its purpose, everyone can learn something from it. For example, Baldoni discusses topics not normally found in traditional speech books such as how to mingle after the speech and recognize a room's dynamics.

Baldoni's assumed readers are those in leadership positions as well as those called on for temporary leadership. The shortness of the chapters makes *The Leader's Guide to Speaking with Presence* a fast read—easily finished by the end of an airline flight. Once accepted that the book is an overview that requires the reader to apply the action steps to his or her situation, it is well worth the price.

One problem with it is the lack of specific examples. In the chapters devoted to PowerPoint elements of the presentation, for example, there are no actual examples of good or bad slides as well as analysis of how the well-designed slide contributes to the impression of leadership. What you'll find in the chapter on PowerPoint is text that sets forth his guidelines for PowerPoint.

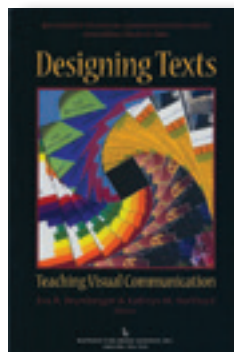
For those who want suggestions for improving the impression they make when giving a presentation, this book could be the answer. Likewise, academics can use the planning questions when teaching oral presentation in their technical communication classes.

### Tom Warren

Tom Warren is an STC Fellow, Jay R. Gould Award for Excellence recipient, and professor emeritus of English (technical writing) at Oklahoma State University, where he established the BA, MA, and PhD technical writing programs. Past president of INTECOM, he serves as guest professor at the University of Paderborn, Germany.

## Designing Texts: Teaching Visual Communication

Eva R. Brumberger and Kathryn M. Northcutt, Eds. 2013. Amityville, NY: Baywood. [ISBN 978-0-89503-785-5. 336 pages, including index. US\$69.95 (softcover).]



Teaching technical communication courses used to be fairly straightforward. The traditional technical report writing course used sample technical reports to provide teachers and students with models to follow.

Then, in the late 1960s, things changed as composition research made its way into the report writing course. No longer were the students imitating models, but examining the process for creating the document. The result was that a process approach replaced the model approach.

You can find similar changes in other elements in course curricula, such as oral communication and visuals, to name two. The problem faced by technical communication teachers and technical communication programs is that textbooks rarely go beyond the surface: consider your audience, adapt your material to that audience, etc.

A topic in a traditional textbook that usually received superficial attention was visuals used to support the text. Students were taught some fundamentals of visuals design, but not much else. Now, technical communication scholars are turning their attention to the deeper meanings of visuals—for example, visuals can make an argument that can be analyzed using rhetorical principles.

Brumberger and Northcutt have assembled 14 essays in their *Designing Text: Teaching Visual Communication* that address teaching visual communication. Roughly

following the same basic pattern, the essays present theory followed by classroom application. The authors of the essays have presented an invaluable resource for teachers (and to some extent, trainers) who want their students to delve as deeply into developing visuals as they do during audience analysis. Also, there may be programs that want to develop one or more courses in visuals. This anthology should prove extremely helpful.

Make no mistake; this anthology is a scholarly book with all the scholarly apparatus and not a book that is easy reading. Hence, the primary audience is teachers in technical communication programs.

Brumberger and Northcutt divide the essays into four groups with a fifth being their overall conclusion. Topics covered include visual thinking and problem solving (Part 1), the context for teaching and learning (Part 2), evaluation and assessment (Part 3), and tools and technologies (Part 4). Parts 2 through 4 contain three essays each, while Part 1 has four and Part 5 has one essay. Academics will recognize many of the essays' authors, which adds to the authoritative judgment of the essays. Most of the essays also include a possible syllabus and exercises, and, in Part 3, the authors provide suggestions and forms for evaluating student projects.

While trainers will certainly find the scholarly theory difficult, they can benefit from the suggestions of topics, exercises, and evaluations. That makes *Designing Text* worthwhile for both audiences.

If I were planning a course in effective visual communication, I would want this book available. Thus, I recommend these essays to both academics and trainers.

### Tom Warren

Tom Warren is an STC Fellow, Jay R. Gould Award for Excellence recipient, and professor emeritus of English (technical writing) at Oklahoma State University, where he established the BA, MA, and PhD technical writing programs. Past president of INTECOM, he serves as guest professor at the University of Paderborn, Germany.

## Civility in the Digital Age: How Companies and People Can Triumph over Haters, Trolls, Bullies, and Other Jerks

Andrea Weckerle. 2013. Indianapolis, IN: Que. [ISBN: 978-0-7897-5024-2. 304 pages, including index. US\$24.99 (softcover).]



The digital world is a wild and wooly place where communication is easy, inexpensive, instantaneous, public, and permanent. It offers great benefits, but also contains threats to your reputation, and conflict situations for which you may be ill prepared.

In *Civility in the Digital Age: How Companies and People Can Triumph over Haters, Trolls, Bullies,*

*and Other Jerks*, Andrea Weckerle draws on her experience as an attorney with a background in mediation and conflict resolution to provide the information you need to manage and defend your reputation, and to resolve conflicts when they occur.

Defending your reputation starts with not doing things yourself that you will come to regret. Nothing online stays private, and it is easy for an ill-considered tweet to come back to haunt you. But assuming you avoid self-sabotage, you may still find yourself embroiled in conflicts and under attack.

To ward off and handle attacks, you must first discover and understand what you are dealing with, which is not always easy. Personalities and misinformation often play a part, and the contesting parties may not even agree on what the conflict is about.

To help, Weckerle describes many factors you should consider. Conflicts can range in size from limited private disputes, to full-blown lynch mobs, and issues of content, personalities, power, and identity may come into play. Troublemakers also come in many types, including trolls, sockpuppets (who hide behind false identities), cyberbullies, and just plain difficult people. And to further complicate things, people have preferred conflict handling styles; Warriors enjoy a good fight, Bulldozers coerce, Dodgers evade, and so on.

Weckerle covers the basics of anger management—important for preventing yourself from “flying off the handle” and making things worse. She also devotes chapters to digital literacy—the critical thinking skills

you need in a hyperconnected world, where biases and beliefs, gossip and rumors, abound, and determining the credibility and quality of people and information is often difficult. Weckerle devotes a chapter to the legal aspects of online disputes, including free speech, defamation, privacy, decency, and the importance of having strong social media policies.

Having laid solid groundwork, she discusses in-the-trenches conflict resolution issues, including determining if, when, and how to respond. *Civility in the Digital Age* outlines the dispute management process, and discusses various approaches—negotiation, facilitation, mediation, arbitration, litigation—you may need to consider. If you need to clean up a past reputation, Weckerle points to resources that can help.

Finally, because it is best to be prepared before a conflict starts, or your reputation is damaged, Weckerle brings it all together with a 30-day plan for better conflict management online, in which she lays out a comprehensive series of steps for securing and defending your online reputation.

### Patrick Lufkin

Patrick Lufkin is an STC Associate Fellow with experience in computer documentation, newsletter production, and public relations. He reads widely in science, history, and current affairs, as well as on writing and editing. He chairs the Gordon Scholarship for technical communication and co-chairs the Northern California technical communication competition.

## Visual Usability: Principles and Practices for Designing Digital Applications

Tania Schlatter and Deborah Levinson. 2013. New York, NY: Morgan Kaufmann. [ISBN 978-0-12-398536-1. 322 pages, including index. US\$44.95 (softcover).]



*Visual Usability: Principles and Practices for Designing Digital Applications* is an excellent choice for the instructor looking for a textbook detailing the major principles and practices of designing Web site or mobile device interfaces. The first three chapters present the



“meta-principles” of application design—consistency, hierarchy, and personality. Subsequent chapters demonstrate how specific design practices, such as layout, color, typeface, and images are effective only if used within the parameters represented by the meta-principles.

A key point is that “digital applications are designed for use” (p. xi), and need to be usable—that is, they must compel user engagement in a way that meets the user’s expectations of the tool. Usability achieves such engagement by integrating form (esthetics) with function (utility) through a textual and graphical “visible language” that elicits in the user a productive interaction with the tool (pp. xii-xiii). Users must be attracted to the site and find it useful on their terms.

Usability involves arousing and fulfilling the user’s expectations. The design must convert promises of utility (the affordance of the tool, its intended purpose as perceived by the user) into usability (the user’s engagement with the tool, the realization of its intended purpose). If the application’s purpose lies not in itself, but in its usability, good design must proceed from an understanding of how the user cognitively processes the visible language presented by the interface.

The most important meta-principle for achieving usability is consistency, the repetition of framing elements from screen to screen that arouses and fulfills expectations of continuity and repetition. Consistency is reinforced by two other meta-principles, hierarchy (visually displaying the relative importance of concepts) and personality (concrete, visual attributes unique to the application). Combined with consistency, these principles provide the conceptual context for optimizing design practices such as layout or typeface. Design uninformed by such meta-principles results in a sense of unpredictability or incompleteness that frustrates the user.

*Visual Usability* teaches this approach through its own organization. It is laid out visually and conceptually as if it were itself an application, with chapters focused on applying specific design techniques like layout, color, and imagery according to the meta-principles. The chapters also provide general advice such as making informed decisions by considering the intended audience carefully; elevating the ordinary by presenting common information in unusual ways; and avoiding common mistakes by ensuring consistency among major design elements. Particularly effective is the authors’ running critique of the USDA Web site, *SuperTracker*, for its strengths and weaknesses in visual usability.

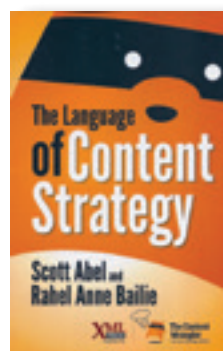
Continually emphasizing meta-principles inculcates fundamental knowledge applicable to any design. Students can be original in developing the application’s personality, but always in terms of enduring aesthetic and functional properties mindful of the tool, the user, and the experience of usability. This emphasis on principle and practice, rather than just practice, makes *Visual Usability* particularly valuable in the classroom.

### Donald R. Riccomini

Donald R. Riccomini is a member of STC and a lecturer in English at Santa Clara University, where he specializes in teaching engineering and technical communications. He previously spent twenty-three years in high technology as a technical writer, engineer, and manager in semiconductors, instrumentation, and server development.

## The Language of Content Strategy

Scott Abel and Rahel Anne Bailie. 2014. Laguna Hills, CA: XML Press. [ISBN: 978-1-937434-34-2. 136 pages, including index. US\$19.95 (softcover).]



“Today’s companies need people who think about information strategically, people who speak the language of content strategy” (p. 5). This language results in terminology like *governance*, *taxonomy*, *content audit*, which will make you “straighten your spine, square your shoulders, and steel your gaze.” These words help bring unity, break boundaries,

and provide a big picture vision to our field.

Content strategy (CS) appeared in 2009 as an offshoot of the information architecture (IA) discipline. IA had its own terminology, and now CS has its own “common vocabulary, an accepted lexicon” that is just beginning to gain notoriety (p. 7).

*The Language of Content Strategy*, its authors, and the 52 contributors have only touched the CS iceberg. Future offerings will continue expanding upon the discipline. The book contains five chapters: “Core Concepts,” “Core Deliverables,” “Technical Concepts,” “Extended Deliverables,” and “Global Content.”



The Core Concept terms include *content*, *content strategy*, *content lifecycle*, *content standards*, *accessibility*, *content optimization*, *content quality assurance*, *findability*, *metadata*, *search engine optimization* (SEO), and *personalization*. Bailie explains “content strategy” as one you will use to “assess an organization’s current state, understand the ideal future state, recognize where the gaps are, and develop an implementation roadmap” (p. 15). Discussing SEO, Trager talks about spamdexing, how sites like Google write algorithms to fight the search for spam.

“Core Deliverables” covers terms like *requirements matrix*, *content inventory*, *content matrix*, *content model*, *content scorecard*, and *taxonomy*.

“Technical Concepts” defines *content reuse*, *modular content*, *transclusion*, *document engineering*, *adaptive content*, *intelligent content*, and *augmented reality*. Day concludes his “structured content” with, “By structuring content appropriately, you can more easily turn information into knowledge, instructions into automation, concepts into lesson units, and more, thereby increasing its value to the business” (p. 63).

“Extended Deliverables” extends the terms from Chapter 2 with *message architecture*, *information visualization*, *editorial calendar*, *transactional content map*, and *folksonomy*. A “transactional map,” according to Francis, helps “ensure that copy displayed to users of an application, whether in an interface, an error, or a feedback message, is on-brand, produced in a streamlined way, and contributes to a positive user experience” (p. 95).

Finally, Chapter 5 looks at global content with terms translation, localization, globalization, internationalization, terminology management, and multilingual search engine optimization. Romano shares that localization is “about producing *aha* in any language, culture, or medium.” An *aha* occurs when the strategy for a localization approach comes together with the content strategy messaging, technologies, and audience resulting in a “dynamic, creative process” (p.111).

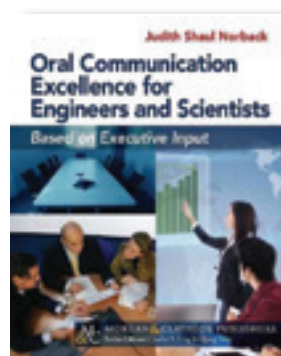
You can now see the tip of the CS iceberg. Abel and Bailie have a good start in *The Language of Content Strategy*. This book helps those new to content strategy get a grasp of the terminology. Our profession fosters the CS field, to which we need to continue adding new words and disciplines. I look forward to the next book in The Content Wrangler Content Strategy Series.

### Jackie Damrau

Jackie Damrau has more than 20 years of technical communication experience. She is a Fellow and member of the STC North Texas Lone Star chapter and the Instructional Design & Learning SIG. She serves as the book review editor for *Technical Communication*.

## Oral Communication Excellence for Engineers and Scientists: Based on Executive Input

Judith Shaul Norback. 2013. San Rafael, CA: Morgan & Claypool. [ISBN-13: 978-1-62705-127-9. 136 pages. US\$40.00 (softcover).]



I want to love *Oral Communication Excellence for Engineers and Scientists*, but I do not. There is some helpful information, but, for someone who is new to oral communication in a professional environment, this information is not easy to identify. If a second edition of the book is published, Ms.

Norback could partner with a practitioner to revise.

For example, the “Background Preparation” chapter talks about audience by answering a series of questions. These questions are too simplistic. With the level of education completed by the engineers and scientists who are reading this book, more thoughtful scenarios can be provided. For example, if you are tasked with setting up the meeting, how to scope the audience? If you’re told to present at a scheduled meeting, explain how to complete an audience analysis.

*Oral Communication Excellence for Engineers and Scientists* spends quite a few pages describing how to prepare charts or posters, and suggests that the communicator not rely on notes. I find this guidance inappropriate. There is a huge movement away from charts and I do not know anyone who uses a poster. It’s difficult to trust the author is a reliable source when she seems so out of touch with the work environment.

Audiences are engaged if the content being communicated is interactive. Whether it is a demo or video (without audio) related to the topic, the presenter

needs to focus on engaging the audience. How the presenter prepares to be engaging depends on the presenter. While some presenters might not need to rely on notes, some people might need those notes to bolster a sense of preparedness.

This book does not spend enough time encouraging the engineer or scientist to think about how to prepare based on their past experiences. Perhaps the reader gets stage fright or notices irregular breathing patterns when presenting. Suggestions like recording a test presentation and listening to a replay would be useful. At the end of the chapter, the reader needs to know that one size does not fit all when it comes to preparing for oral communication experiences. Failing to identify that different people need different routines is a weakness in *Oral Communication Excellence for Engineers and Scientists*.

A chapter about tools is also needed. The engineer or scientist reading this book needs to allocate time to test the tools that will be used during the meeting. For example, if a recording is required, test the recording tool. If an online meeting is going to be used, make sure you can share your screen and others can view your system.

As a technical communicator who has worked with hardware and software development teams for over 15 years, the book is not applicable in today's business environment.

### **Angela Robertson**

Angela Robertson is a technical communicator at IBM in Research Triangle Park, NC. She has a Master of Science degree in technical communication from North Carolina State University

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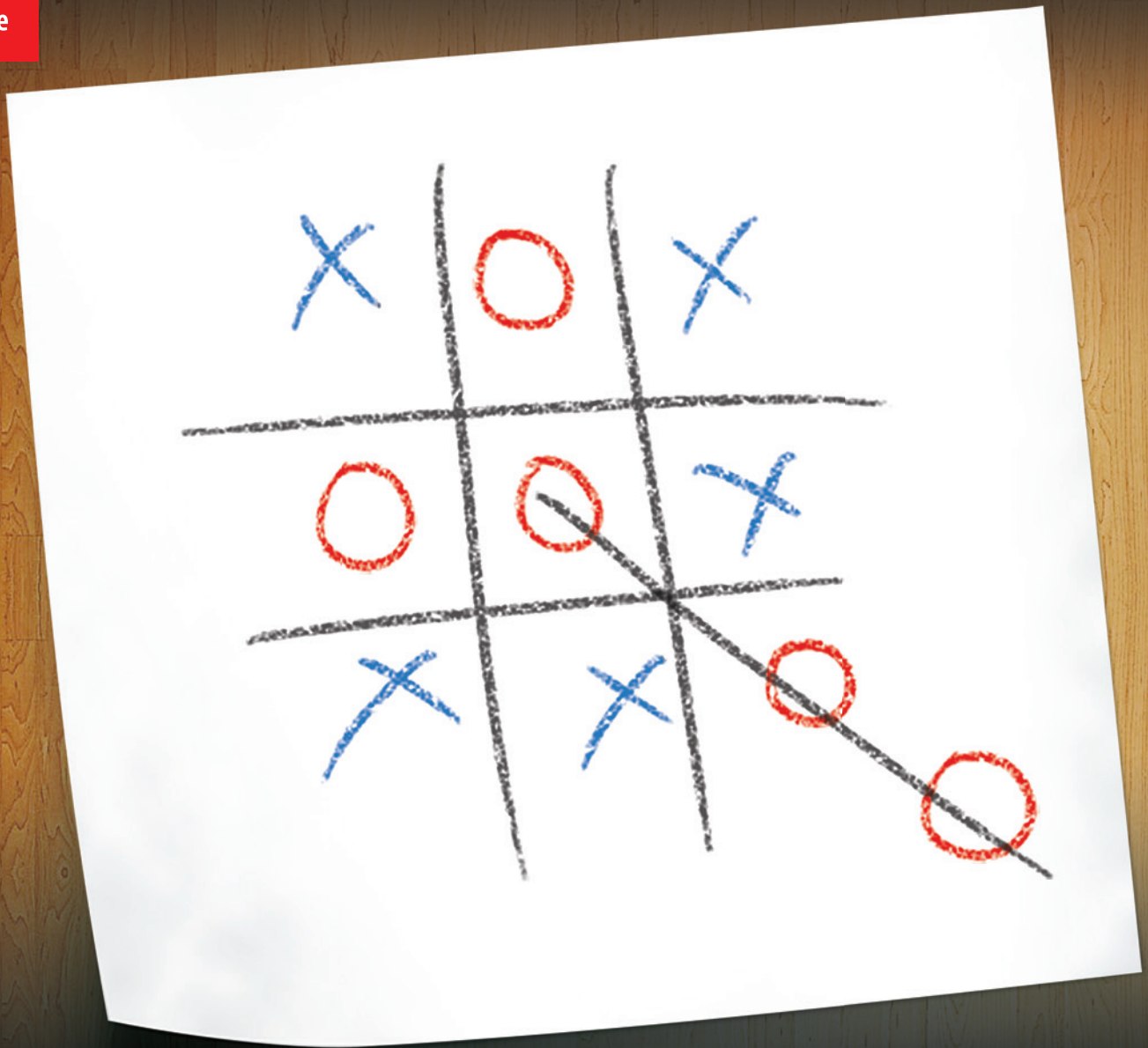
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Lyn Gattis, Editor

The following articles on technical communication have appeared recently in other journals. The abstracts are prepared by volunteer journal monitors. If you would like to contribute, contact Lyn Gattis at [LynGattis@MissouriState.edu](mailto:LynGattis@MissouriState.edu).

“Recent & Relevant” does not supply copies of cited articles. However, most publishers supply reprints, tear sheets, or copies at nominal cost. Lists of publishers’ addresses, covering nearly all the articles we have cited, appear in Ulrich’s international periodicals directory.

## Collaboration

### **Developing a playbook strategy for efficient collaboration**

Robidoux, C., Abe, M., & Dill, T. (2014). *Best Practices*, 16, 14–18. [Center for Information-Development Management]

“When writers manage content at the component level, they can lose a sense of ownership, certainty, and control over the writing process. Their overall sense of competence can become undermined, along with their willingness to collaborate. In this article, [the authors] explore how to create more structure to solve this problem. Cultivating collaborative writing efficiency depends on a clear delineation of how the team will work together during key phases in a project. The process of scripting a set of tasks ensures that each member on the team knows exactly how to coordinate with the others. [The authors] refer to these scripts as ‘plays,’ drawing on the analogy from team sports or dramatic performances. [The article contains] a short background of the play and the playbook strategy, a description of how it works, and a snapshot of how teams in our organizations are using the strategy to optimize efficiency.”

Lyn Gattis

### **The effects of task complexity and group member experience on computer-mediated groups facing deception**

Giordano, G., & George, J. F. (2013). *IEEE Transactions on Professional Communication*, 56, 210–225. doi: 10.1109/TPC.2013.2273817

“Due to globalization and the increased availability of online collaboration tools, individuals are now likely to work together in settings where computers are their primary mode of communication. However, because communication characteristics are different in virtual team settings, especially when they are text based, communication problems, such as deception, arise. Recent research found that deceptive individuals in virtual teams can have a negative impact on group task performance, and it recognized that in addition to the communication medium, task and group characteristics, such as task complexity and group member experience, are important influences in these settings. However, the impacts of these additional influences have not been empirically examined.... Previous literature has shown that deceivers are an important influence on computer-mediated groups. However, few studies have compared different group settings, and no studies have empirically tested the impact that task and group characteristics, such as task complexity and group member experience, have on these types of groups.... An experiment was designed to test the effect of group member experience and task complexity on computer-mediated groups facing deception. Two-hundred fifty-six undergraduates (256) were selected for the experiment.... Quantitative analysis, which included multivariate analysis of variance, revealed that (a) groups performing a low-complexity task were better at detecting deception than were groups performing a high-complexity task, (b) groups with members who had experience with each other had higher task performance than did inexperienced groups, and (c) experienced groups did

not have higher accuracy in detecting deception than did inexperienced groups. These results highlight the importance of understanding the different affects that task complexity and group member experience have on virtual teams facing deception, and they provide insight into what practices can help minimize the impact of interactive computer-mediated deception.”

Lyn Gattis

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## Communication

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### **A study of how information system professionals comprehend indirect and direct speech acts in project communication**

Yin, C.-P., & Kuo, F.-Y. (2013). *IEEE Transactions on Professional Communication*, 56, 226–241. doi: 10.1109/TPC.2013.2263648

“Indirect communication is prevalent in business communication practices. For information systems (IS) projects that require professionals from multiple disciplines to work together, the use of indirect communication may hinder successful design, implementation, and maintenance of these systems. Drawing on the Speech Act Theory (SAT), this study investigates how direct and indirect speech acts may influence language comprehension in the setting of communication problems inherent in IS projects.... The current study uses a quantitative approach. A between-groups experiment design was employed to test how direct and indirect speech acts influence the language comprehension of participants. Forty-three IS professionals participated in the experiment. In addition, through the use of eye-tracking technology, this study captured the attention process and analyzed the relationship between attention and comprehension.... The results show that the directness of speech acts significantly influences participants’ attention process, which, in turn, significantly affects their comprehension. Professionals and managers of organizations should be aware that effective communication in interdisciplinary projects, such as IS development, is not easy, and that reliance on polite or indirect communication may inhibit the generation of valid information.”

Lyn Gattis

### **Switching in Twitter’s hashtagged exchanges**

Jones, J. (2013). *Journal of Business and Technical Communication*, 28, 83–108. doi: 10.1177/1050651913502358

“Networks have a remarkable ability to bring people together in communities, both online and offline, but such community building is not the only possible result of network use. This article examines the case of a tagging network on Twitter, the online social networking service characterized by short messages. Although Twitter has many social features that foster interaction between users, the use of hashtags to signal the topic of a message exists outside of the site’s primary social structures, creating a unique writing environment. This article analyzes a hashtagged exchange surrounding the 2009 health care debate in the United States, examining the social features of this exchange and how participants used it to communicate about that debate. While traditional social features were certainly present within the exchange, they were not prominent or common; rather, users engaged the network properties of this exchange to make connections with other networks, drawing on a form of network power called switching. The analysis focuses on how the Twitter network’s structural features affect communication between users.”

Lyn Gattis

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## Design

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### **Icon design to improve communication of health information to older adults**

Kascak, L., Rebola, C. B., Braunstein, R., & Sanford, J. A. (2013). *Communication Design Quarterly Review*, 2, 6–32. doi: 10.1145/2559866.2559867

“This paper describes the studies undertaken in order to improve and simplify communication of health information for Remote Patient Monitoring (RPM) devices, specifically the BL Healthcare Access Tablet, to older adults. Current icon and information design of the RPM devices are not well designed to reflect the needs, experiences and limitations of the older adults. In addition to this, compliance with self-management schedules is often poor due to complex and unclear

instructions and information design. The issue of compliance, with the need for effective communication between chronic disease patients and healthcare professionals emphasize the need for the appropriate information design and communication technology. Communication of health information was improved from the perspective of the user experience (UX) design and information design. For the purpose of addressing the UX redesign, usability studies were conducted, followed by the information redesign and icons design. Although medical peripherals, such as an electronic thermometer, are required to measure the patient information, a mobile or tablet application can easily be used to record, send and view this data. A concept for the RPM mobile application is developed, that could be used on existing tablets and smartphones, thus eliminating the need for the current costly hardware.”

Lyn Gattis

## Editing

### **Using editing checklists for more efficient editing**

Schrank, K. (2014). *AMWA Journal*, 28, 164–5.

Inspired by Atul Gawande’s *The Checklist Manifesto: How to Get Things Right* (2010) Schrank proposes that editorial checklists designed for specific, regularly encountered document types can increase efficiency by providing the optimal sequence for performing editorial tasks and by limiting errors possibly caused by interruptions during the editing process. Even though the initial creation and implementation of the list may take time, the result is less time spent on copyediting, leaving more available for substantive editorial work. Instructions for writing the lists are provided, along with a table comparing a poorly-constructed list with a good one.

Magdalena Berry

## Education

### **Defining “research”: Undergraduate perceptions of research in a technical communication classroom**

Ross, G. (2014). *Journal of Technical Writing and Communication*, 44, 61–69. doi: 10.2190/TW.44.1.e

“This article presents data from a two-part study of student perceptions of research. Fifty-one research proposals are analyzed in order to understand perceptions of research, and results from a survey are analyzed to better understand how students both perceive and articulate their understanding of research. The data show that students assign multiple definitions to the concept of research, and suggest that increased attention to clarifying terminology and identifying student perceptions would facilitate better work.”

Nick Carrington

### **Teaching evidence-based writing using corporate blogs**

Lee, C.-C. (2013). *IEEE Transactions on Professional Communication*, 56, 242–255. doi: 10.1109/TPC.2013.2273117

“.... The ability to engage in argument from evidence is one of the Next Generation Science Standards for scientific and engineering practices. Thus, it is important for engineering students to know how to present evidence-based arguments. The communication model framework was introduced to provide students with a framework to base their arguments on. This framework builds on the genre-based and academic literacies approaches to teaching writing. More companies are now using corporate blogs (an open, participatory, and globally networked social media tool) to engage stakeholders directly across multiple contexts. The framework is useful in analyzing evolving genres like corporate blogs because it is not only structured but also flexible.... Working in groups, the students used the framework for their oral practice critique and their critique assignment on a given piece of academic writing or corporate blog. They also had to write a reflection paper individually at the end of the course.... Overall, the mixed groups and international students groups made a stronger

attempt to apply the framework compared to the Singaporean student groups. The students' educational backgrounds, the group dynamics within the group, and the nature of the discussions affected the level of adoption of the framework in their writing...."

Lyn Gattis

### ***Wicked problems in technical communication***

Wickman, C. (2014). *Journal of Technical Writing and Communication*, 44, 23–42. doi: 10.2190/TW.44.1.c

"This article develops a framework for rhetorical inquiry that builds on the concept of wicked problems as conceptualized through social policy and design studies research. Responding to technical communication scholarship that calls for increased engagement with public issues and controversies, the author specifically discusses a writing course that used the 2010 Gulf of Mexico oil spill as a basis for teaching problem-based rhetorical invention, document production, interdisciplinary collaboration, and professional development. The framework described in this article ultimately offers a heuristic for students to research and write about ill-defined problems that must be addressed in time but that demand sustained engagement over time—activities that begin in the classroom but ideally continue to develop throughout their personal and professional lives."

Nick Carrington

## **Ethics**

### ***Framing sustainability: Business students writing about the environment***

Mathison, M. A., Stillman-Webb, N., & Bell, S. A. (2013). *Journal of Business and Technical Communication*, 28, 58–82. doi: 10.1177/1050651913502488

"Corporate social responsibility is a topic that is increasingly incorporated into business school curricula. This article describes a study of undergraduate business majors who wrote about an environmental topic in response to an Analytical Writing Assessment

question in the Graduate Management Admission Test™. Of 187 students, only 76 mentioned natural resources in their responses. The study examines this smaller corpus for stance, framing, and argument. The results indicate that the majority of those 76 students supported sustainable practices but were less adept at presenting their perspectives, invoking a personal frame over a professional one. The authors suggest ways to help students develop stronger skills in writing about corporate social responsibility."

Lyn Gattis

## **Health communication**

### ***Readability and text cohesion of online colorectal cancer and screening information***

Liu, C., Yates, K. E., & Rawl, S. M. (2014). *AMWA Journal*, 28, 146–151.

"A common goal of medical writers is to clearly communicate health information. When the intended audience is the lay public rather than health care providers and scientists, writers and editors have often turned to readability formulas in the quest to improve comprehension by readers. Although their use is widespread, these formulas leave out textual factors that are critical to comprehension, such as text cohesion. Recent advances in reading comprehension studies and computation technology have resulted in the development of automated linguistic analysis tools that writers may find useful to analyze text cohesion. [The authors] sought to evaluate in health education materials whether text cohesion is correlated with readability as assessed by a readability formula. The current study used an online linguistic computation tool, Coh-Metrix, to analyze text cohesion in addition to reading grade levels of 55 online texts of colorectal cancer and screening information. Indices of referential cohesion (argument and word stem overlap among sentences) and semantic cohesion (semantic and conceptual similarity among sentences) were selected to measure text cohesion. The Flesch-Kincaid Grade Level was selected to assess reading grade levels. Results showed that text materials written at lower reading grade levels as assessed by the reading formula seem



to be low in text cohesion. Although text length is not associated with the degree of referential cohesion or semantic cohesion, the Flesch-Kincaid Grade Level is positively associated with both. [The] study suggests that text cohesion may need to be considered in the effort to improve readability of written health information. Simply lowering the reading grade level of a given text may inadvertently decrease text cohesion and therefore comprehension. Medical writers and editors may wish to explore linguistic computation tools to analyze their documents and potentially increase comprehension by their readers.”

Magdalena Berry

## Information management

### **A case study in curbing a reliance on inline links**

Berry, M. (2014). *Best Practices*, 16, 19–22. [Center for Information-Development Management]

This article addresses the problem of “[e]xuberant overuse of online links” in help content, which in the author’s organization had created “several problems, including inflexible content, and reliance on links instead of finding better structure.” In the process of “turning a 4,500 page PDF into 13 smaller ones,” the writing team found ways to eliminate about 46 percent of the inline links in the original help document. The author identifies lessons learned as “creating more customer-focused documentation, including examples, and being quick to answer the ‘why’ as well as the ‘how’.” The author emphasizes the value of “measurements of actual usage. [The team has] started regular, consistent practices around reviewing page views, comments, and ratings to refine [their] intuition and learn what works and what doesn’t” in creating topics “that more closely match the actual user tasks.”

Lyn Gattis

### **How we use minimalism and a new form of task-oriented help, WalkHub, to overcome cognitive load in web applications**

van Tomme, K., & Lakatos, D. (2014). *Best Practices*, 16, 23–27. [Center for Information-Development Management]

“This article reviews the evolution of online help and investigates the issues users and technical writers face in online communication. Intense cognitive load, frequent updates, new ways of collaboration on software required new approaches in documenting online interfaces. [The authors] found that DITA principles can build a strong foundation for a new tool that follows the way people actually perform tasks online. To this end, [the authors] developed WalkHub, an open source, step-by-step, interactive tutorial and documentation tool with DITA concepts in mind.”

Lyn Gattis

## Instructions

### **User manuals for a primary care electronic medical record system: A mixed-methods study of user- and vendor-generated documents**

Shachak, A., Dow, R., Barnsley, J., Tu, K., Domb, S., Jadad, A. R., & Lemieux-Charles, L. (2013). *IEEE Transactions on Professional Communication*, 56, 194–209. doi: 10.1109/TPC.2013.2263649

“Tutorials and user manuals are important forms of impersonal support for using software applications, including electronic medical records (EMRs). Differences between user- and vendor-generated documentation may indicate support needs, which are not sufficiently addressed by the official documentation, and reveal new elements that may inform the design of tutorials and user manuals.... Effective design of tutorials and user manuals requires careful packaging of information, balance between declarative and procedural texts, an action and task-oriented approach, support for error recognition and recovery, and effective use of visual elements. No previous research compared these elements between formal and informal documents.... [The authors]

conducted a mixed-methods study. Seven tutorials and two manuals for an EMR were collected from three family health teams and compared with the official user manual from the software vendor. Documents were qualitatively analyzed using a framework analysis approach in relation to the principles of technical documentation described before. Subsets of the data were quantitatively analyzed using cross-tabulation to compare the types of error information and visual cues in screen captures between user- and vendor-generated manuals.... The user-developed tutorials and manuals differed from the vendor-developed manual in that they contained mostly procedural and not declarative information; were customized to the specific workflow, user roles, and patient characteristics; contained more error information related to work processes than software usage; and used explicit visual cues on screen captures to help users identify window elements. These findings imply that to support EMR implementation, tutorials and manuals need to be customized and adapted to specific organizational contexts and workflows. The main limitation of the study is its generalizability. Future research should address this limitation and may explore alternative approaches to software documentation, such as modular manuals or participatory design.”

Lyn Gattis

## Intercultural communication

### **An important link in the chain connecting ancient Chinese philosophy to present-day style of Chinese technical communication: Introducing Yellow Emperor’s classic of internal medicine—China’s first comprehensive medical book**

Ding, D. (2014). *Journal of Technical Writing and Communication*, 44, 43–59. doi: 10.2190/TW.44.1.d.

“Yellow Emperor’s Classic of Internal Medicine, China’s first comprehensive medical book, served as the key link between Yi Jing, which initiated China’s high-context culture, and the high-context style of modern Chinese technical communication. In the

form of dialogues between Yellow Emperor and his minister, its 24 fascicles cover four major topics of the organs, diagnosis, diseases, and treatments. While examining the body and discussing various diseases and treatments, the book expands on Yi Jing’s philosophy through integrating three interrelated concepts: Tao, Yin and Yang, and Five Elements (wood, fire, soil, metal, and water). In this way, the book, for the first time in Chinese history, explicitly treated humans and their behaviors as individual events conditioned by the natural context, emphasizing context as the conditioning force. This emphasis on context is manifest in modern Chinese technical communication as two textual devices of establishing personal relationships and creating ideal physical environments.”

Nick Carrington

### **Leadership styles in multicultural groups: Americans and East Asians working together**

Aritz, J., & Walker, R. (2014). *International Journal of Business Communication*, 51, 72–92. doi: 10.1177/2329488413516211

“The global economy has created new realities for businesses, and the need for understanding differing communication practices and cultural values is greater than ever, particularly with regard to the surging economies in the East. Working in multicultural work groups is a new workplace reality that has created a greater need to understand how to lead these groups to maximize the quality and effectiveness of multicultural group work. Cultural differences exist regarding the importance and value of leadership. Still, much remains to be understood as to the way in which culture influences leadership and organizational processes. To what extent do cultural forces influence the expectations that individuals have for leaders and their behavior, for instance? What principles of leadership and organizational processes transcend cultures? This article is primarily directed to an American audience and uses a discursive leadership approach to provide a better understanding of how different leadership styles affect group member interaction in multicultural groups involving participants from American and East Asian cultures. Our results demonstrate that differing discursive leadership styles can affect the participation and

contribution of members and may affect their feelings of inclusion and satisfaction within the group. Our results also provide evidence that particular styles of and approaches to leadership may not be as successful with all cultural groups.”

Katherine Wertz

### **Lying in intra-Asian business discourse in an ELF setting**

Hiromasa, T. (2014). *International Journal of Business Communication*, 51, 58–71. doi: 10.1177/2329488413516209

“Previous studies have reported that the act of lying is ubiquitous. Although lies are generally regarded as a threat to the moral fabric of society, some lies are told in order to maintain or even enhance human relations. Such lies, therefore, could even be justified as an adaptive tool at times essential for the maintenance of social relationships. When speakers of English as a lingua franca (ELF) from different cultural backgrounds interact in order to build and maintain business relationships, the communication problems that develop can be accounted for in terms of differing perceptions that individuals have of what deceptive communication entails. This study aims to redefine intercultural business communication from an Asian perspective by examining naturally occurring business interaction between Japanese and Indian small business owners. The participants seek to establish a mutually beneficial relationship in order to cooperate in joint commercial activity. Special attention is paid to the lies told and detected by interlocutors. Employing the notion of business discourse, this study uses multiple analytical methods. The analysis depicts meaning jointly created as a result of strategic interaction. Because presenting truth tactfully requires of interlocutors’ high linguistic and communicative competence, ELF users use lies as an easy strategy for avoiding conflicts. This study emphasizes situated discourse and identity as critical factors affecting intercultural business communication.”

Katherine Wertz

## **Management**

### **Do communication abilities affect promotion decisions? Some data from the C-suite**

Reinsch, N. L., & Gardner, J. A. (2013). *Journal of Business and Technical Communication*, 28, 31–57. doi: 10.1177/1050651913502357

“Senior U.S. business executives reported that in making recent promotion decisions, they had placed a great deal of weight on candidates’ interpersonal skills, less weight on oral communication skills, and even less weight on writing skills. Older business managers ranked communication skills as more important than did the younger managers. If this age-related difference is a maturation effect, younger managers may place more emphasis on communication as they mature. If the age-related difference is a cohort effect, the relative importance of communication skills for advancement may shift as Generation X executives replace boomer executives in top-level positions at U.S. corporations.”

Lyn Gattis

## **Public relations**

### **Impression management strategies in company-consumer interactions**

Lillqvist, E., & Louhiala-Salminen, L. (2013). *Journal of Business and Technical Communication*, 28, 3–30. doi: 10.1177/1050651913502359

“This study examines interaction between corporate representatives and critical consumers in today’s social media environment. Applying a microanalytical form of discourse analysis to a data set of corporate Facebook page discussions, the study contributes to a better understanding of the communicative resources that organizations use as part of their impression management (IM) for upholding their acceptability and promoting their credibility. The study also reveals the complexity of the work of corporate Facebook representatives, who need to align their individual IM with that of the organization while adjusting to the technologically mediated context.”

Lyn Gattis

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## Research

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### **Comparison as a mode of inquiry: Rearticulating the contexts of intercultural communication**

Cummings, L. (2014). *Rhetoric, Professional Communication, and Globalization*, 5, 126–146.

“Though contrastive rhetoric has strong ties with professional and intercultural communication ... , further discussions in comparative rhetoric can inform research in professional communication by developing more reflective approaches to comparison as a mode of inquiry.... Too often, variations in cultures, human behavior, rhetoric, or language use are seen as obstacles to developing national and cultural relationships, or problems to be solved, rather than generative moments of interaction, where new knowledge is being formed.... Drawing from discussions among comparative scholars in English studies... , this article examines comparison as a distinct mode of inquiry that requires more precise, yet flexible, methodologies, fostering self-reflexive approaches to knowledge that can rearticulate how we see professional and intercultural communication, particularly in multilingual and online spaces.”

Anita Ford

### **Designing for engagement: Intercultural communication and/as participatory design**

Getto, G. (2014). *Rhetoric, Professional Communication, and Globalization*, 5, 44–46.

“Intercultural researchers have amassed a wealth of best practices when it comes to improving communication in situations where interlocutors are globally dispersed, linguistically diverse, and operating from within radically different cultural systems. At the same time, little attention has been paid to the infrastructure that supports such communication, and how its attendant technologies, networks, and specific modes of communication are culturally embedded and thus both encourage and constrain possibilities for intercultural communication.... [The author] presents ... a method for researching and designing communication

infrastructure so that culturally-situated practices and values of both designers and users are treated as assets for design....”

Anita Ford

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## Science writing

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### **Framing and re-framing in environmental science: Explaining climate change to the public**

Rademaekers, J., & Johnson-Sheehan, R. (2014). *Journal of Technical Writing and Communication*, 44, 3–21. doi: 10.2190/TW.44.1.b

“Environmental scientists and science communicators working to educate the public on the science of global climate change often work to present information through an environmentalist perspective. This article uses theories of metaphoric framing to present six guidelines that climate change communicators can use to reframe climate change science in public communication. In particular, the authors argue for environmental scientists to adopt frames that the broader public will find familiar and persuasive. This reframing of environmental science is necessary to counter the framing of skepticism that special interest groups have used to dominate attempts to communicate climate change science to the public.”

Nick Carrington

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## Writing

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### **The quotation theory of writing**

Olson, D. R., & Oatley, K. (2014). *Written Communication*, 31, 4–26. doi: 10.1177/0741088313515164

“Learning to read and write is seen as both the acquisition of skills useful in a modern society and an introduction to a world increasingly organized around the reading and writing of authoritative texts. While most agree on the importance of writing, insufficient attention has been given to the more basic question of just what writing is, that is, how best to think about



writing as both a technology of communication and an instrument of thought. In this article [the authors] elaborate and defend the view that writing is distinctive not only as a technology for the visual representation of speech but more basically as a technology for taking language 'off-line,' that is, as language enclosed by quotation marks. Writing, like oral quotation, provides a set of objects divorced from the speaker that persist in time and space and that can be considered and reconsidered somewhat independently of the context of expression and the intentions of the original author. Of special relevance are the units of meaning, namely, words and sentences. When writing turns words and sentences into objects of analysis, it facilitates distinctive modes of discourse such as extended prose and distinctive modes of thinking such as formal rationality."

**Hunter Auman**